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10.15.02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : Confirmation No. 3379
Mitsuaki OSHIMA et al. : Docket No.2000_1422
Serial No. 09/686,466 : Group Art Unit 2634
Filed October 12, 2000 : Examiner A. Le
COMMUNICATION SYSTEM :

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SUBMISSION OF FORMAL DRAWINGS

Assistant Commissioner for Patents,
Washington, D.C.

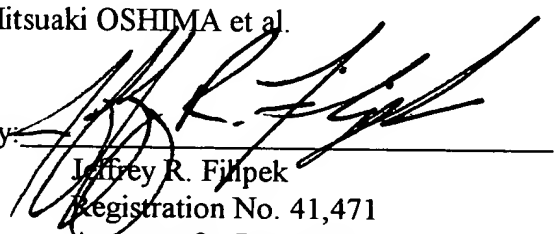
Sir:

As required by the Examiner in the Office Action mailed April 9, 2002, 178 sheets of formal (8½ x 11) drawings (Figs. 1-179) are submitted herewith.

Respectfully submitted,

Mitsuaki OSHIMA et al.

By:


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Attorney for Patentees

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October 9, 2002

FIG. 1

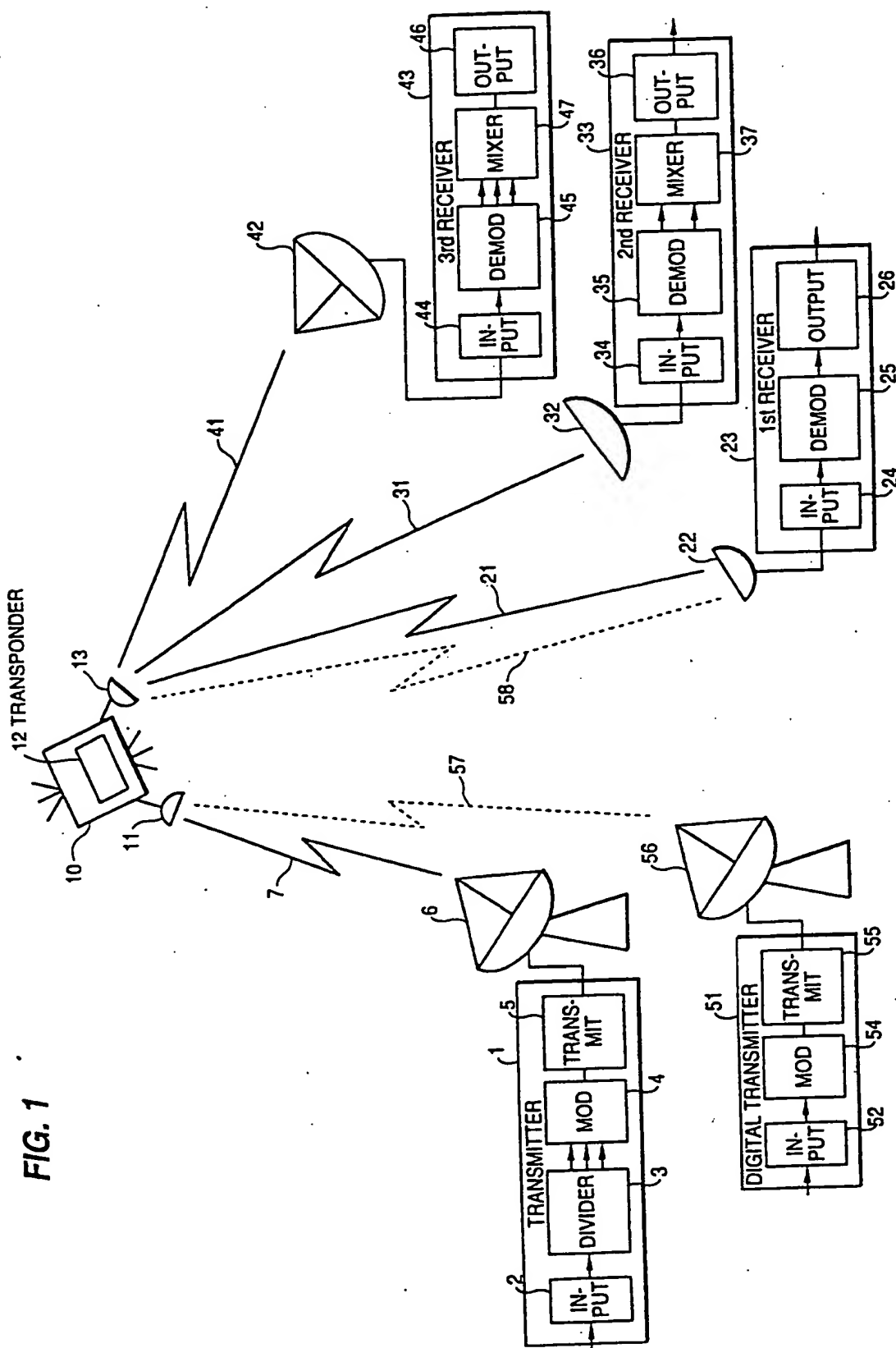


FIG. 2 (Amended)

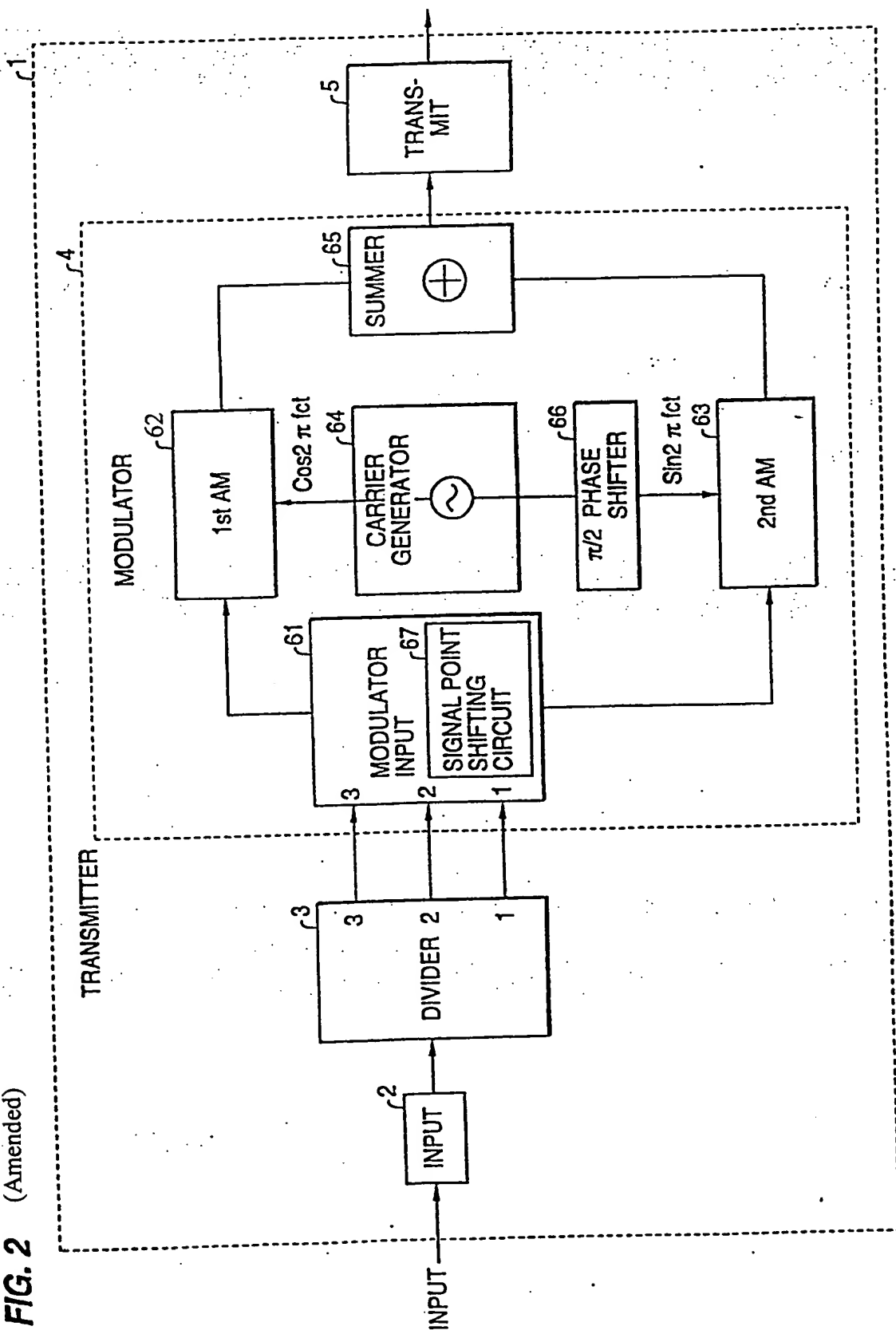


FIG. 3

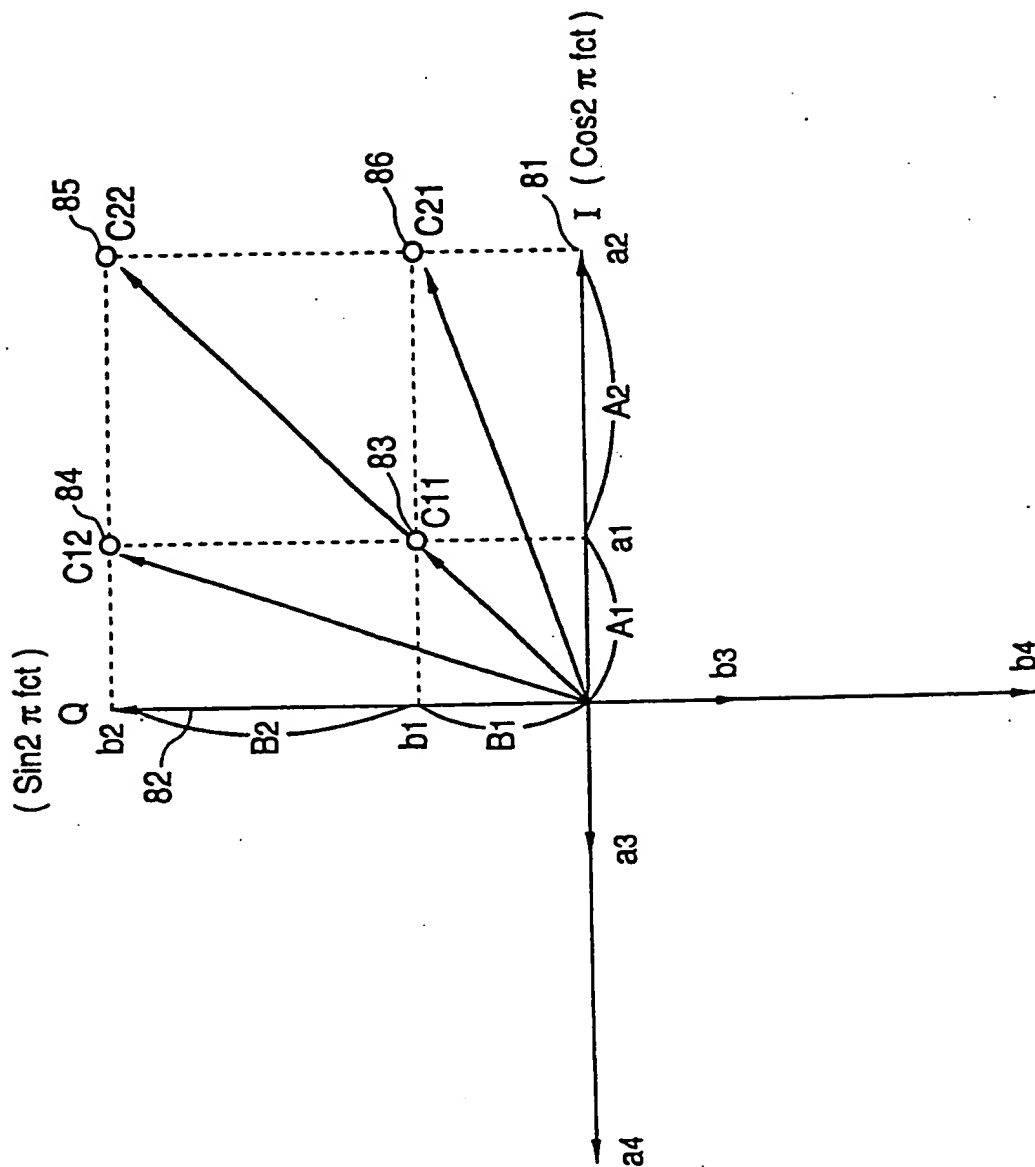


FIG. 4

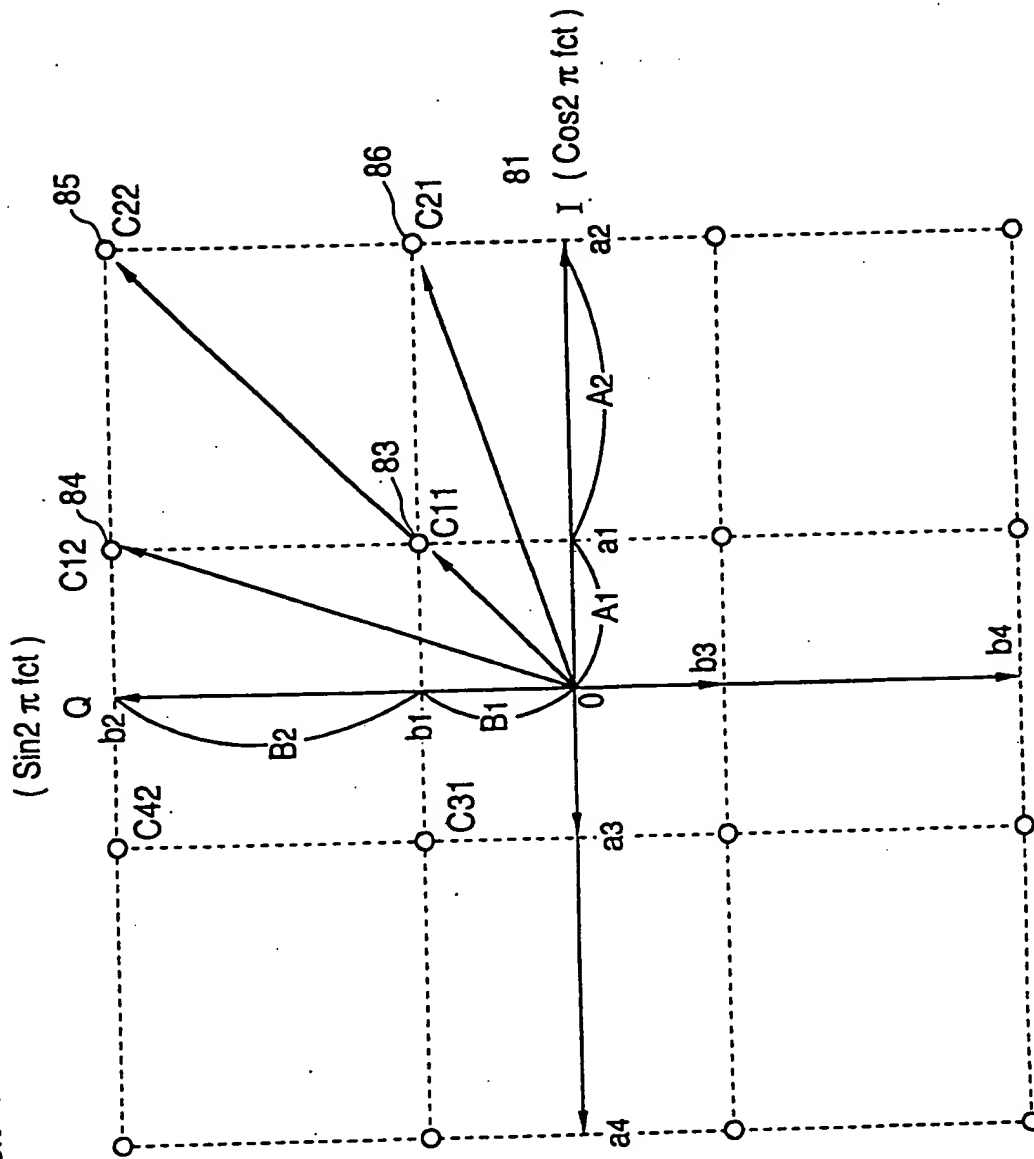


FIG. 5

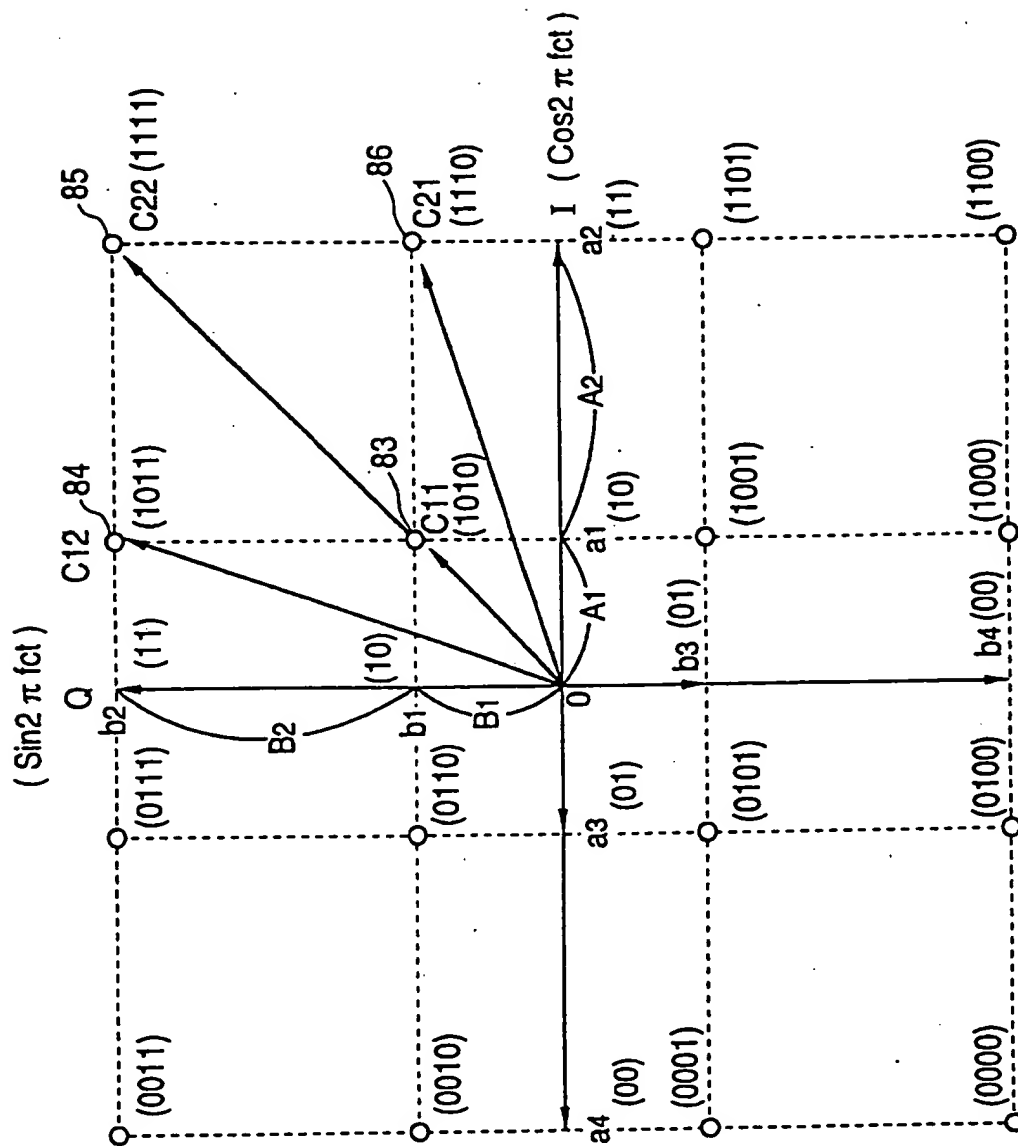


FIG. 6

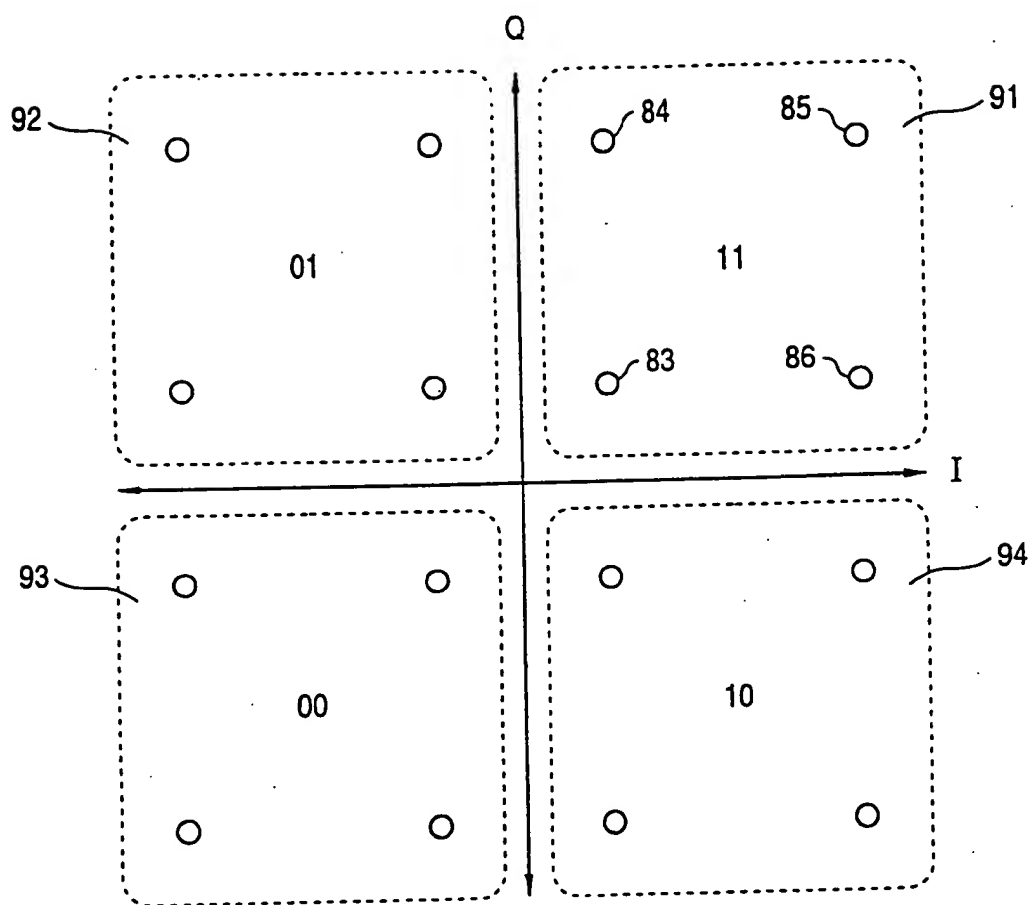


FIG. 7

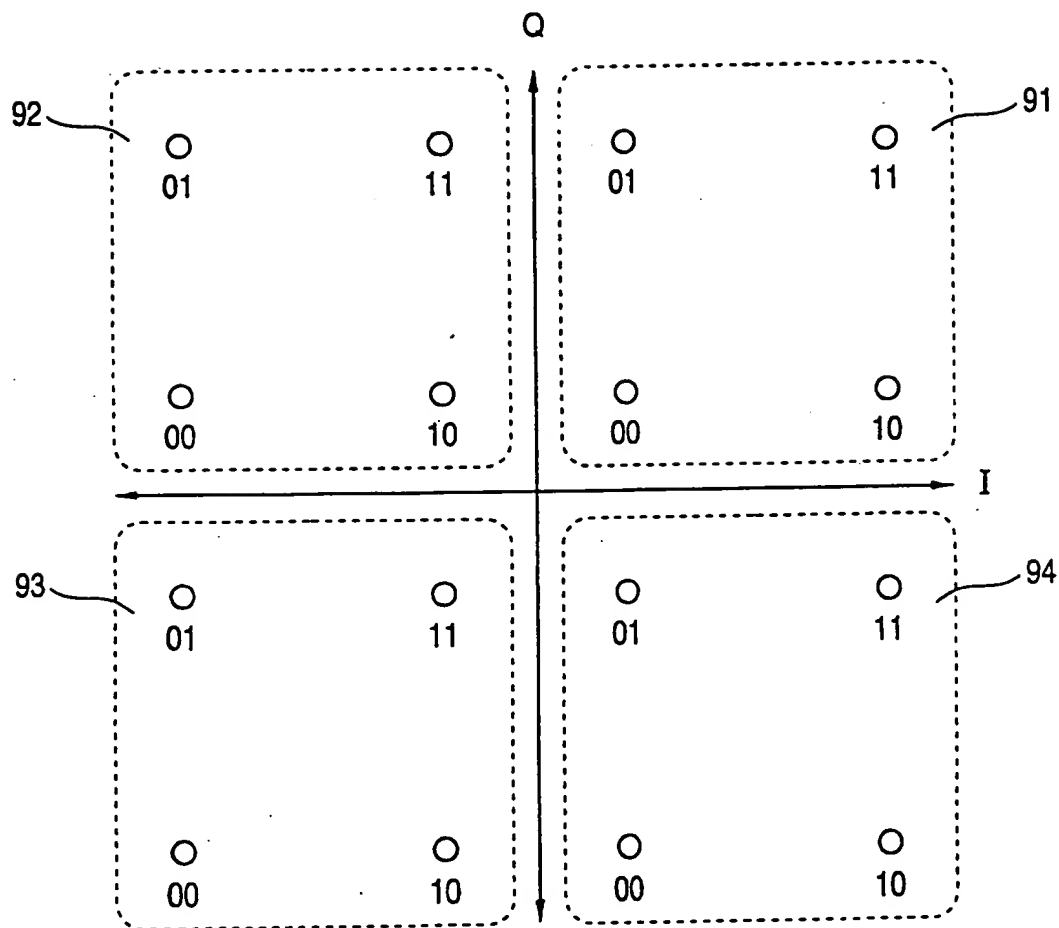


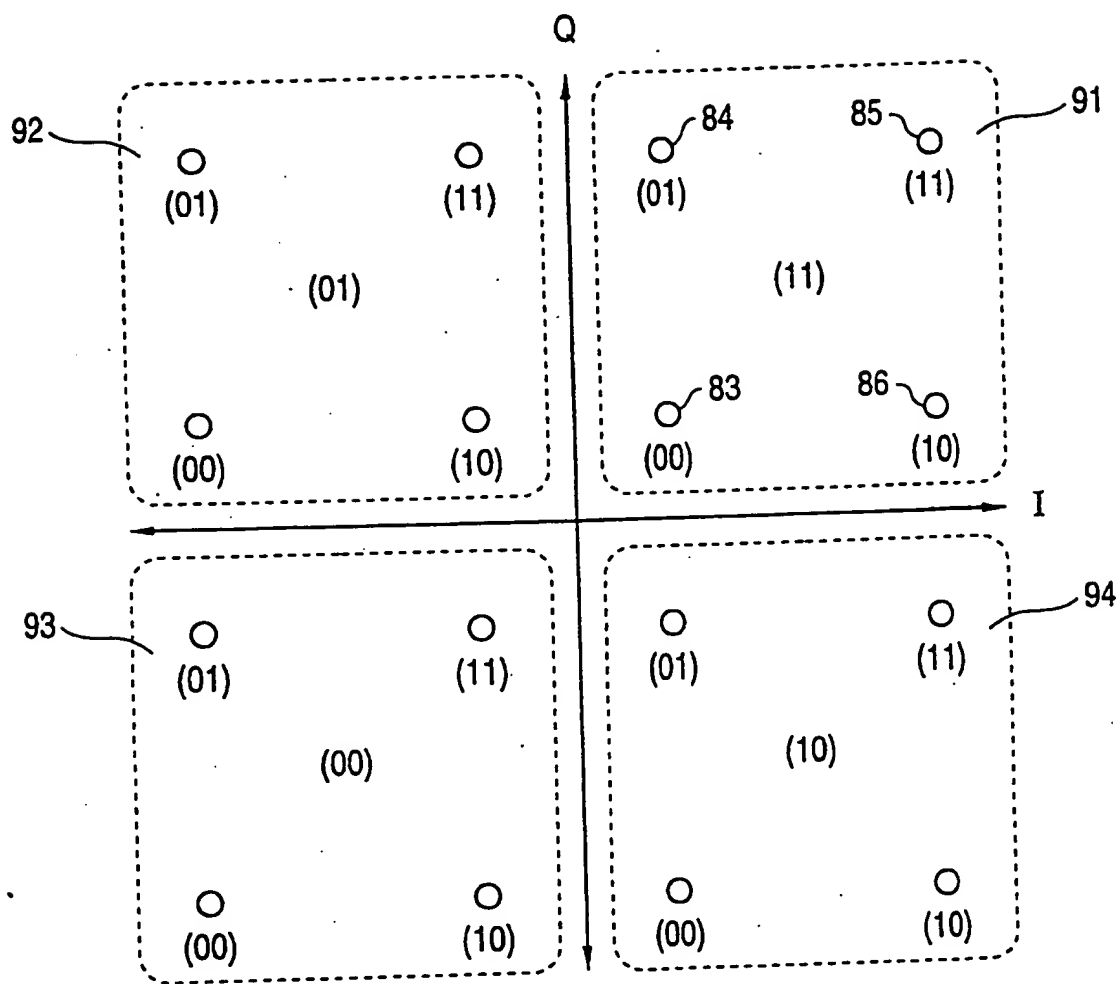
FIG. 8

FIG. 9

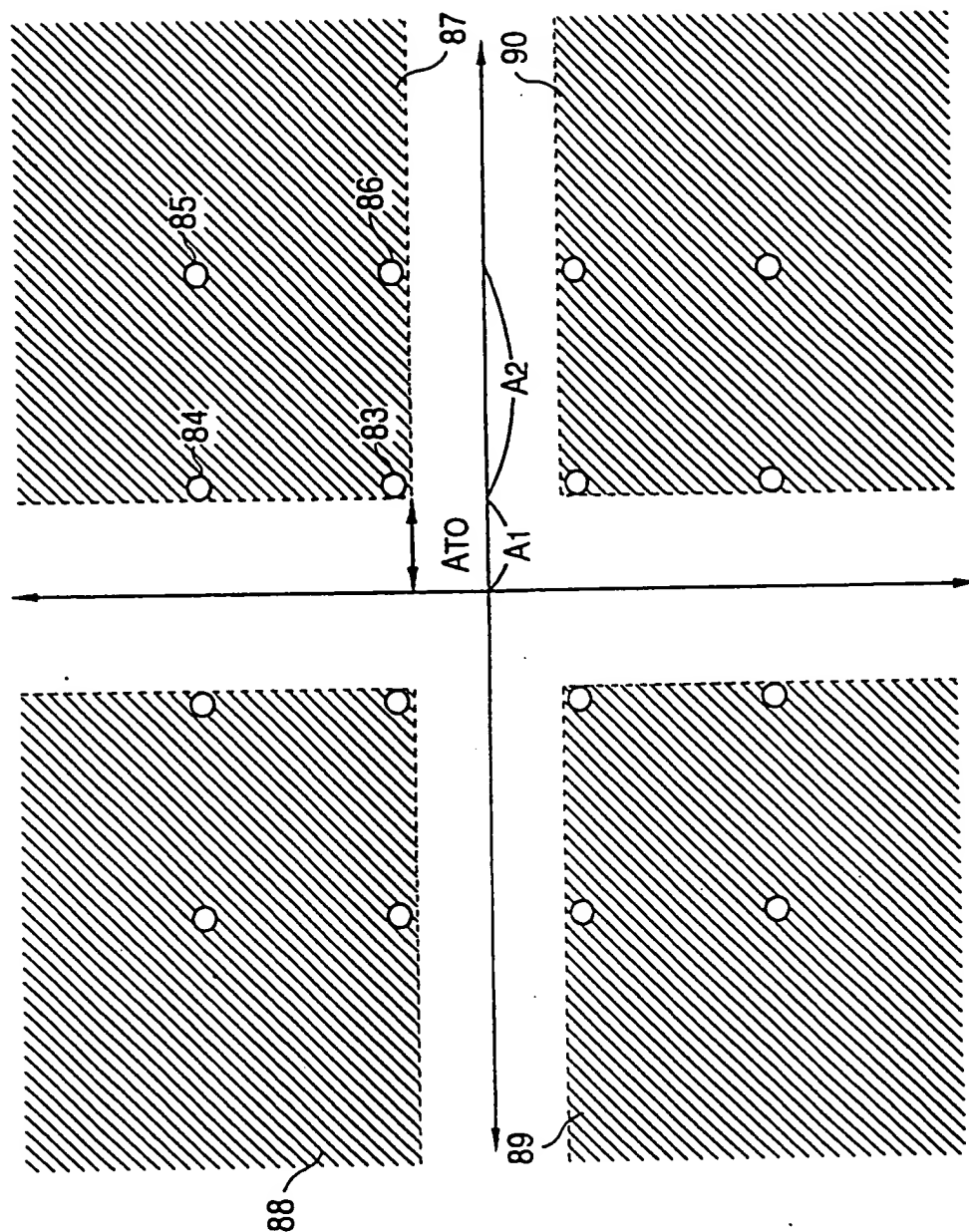


FIG. 10 (Amended)

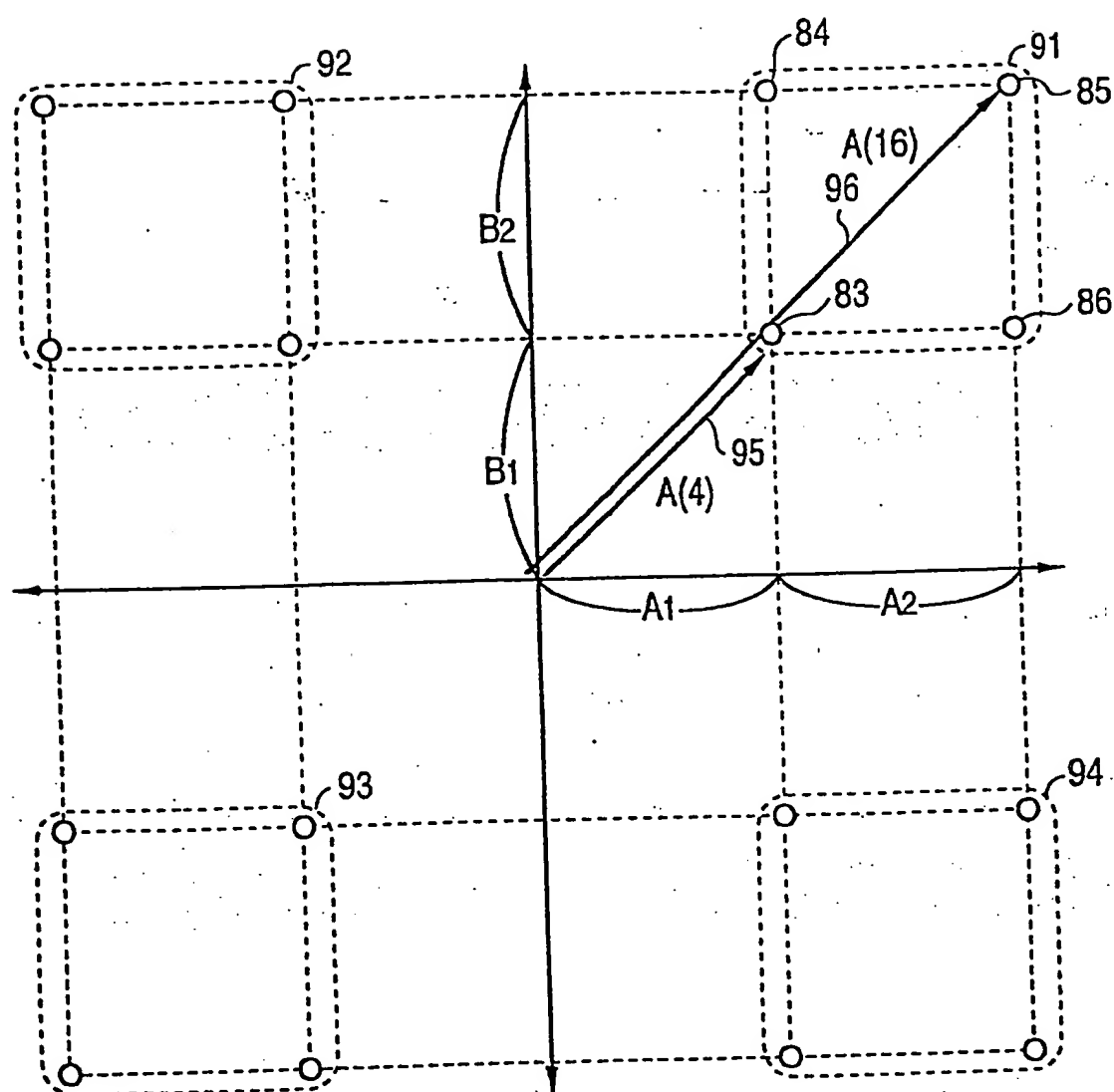


FIG. 11

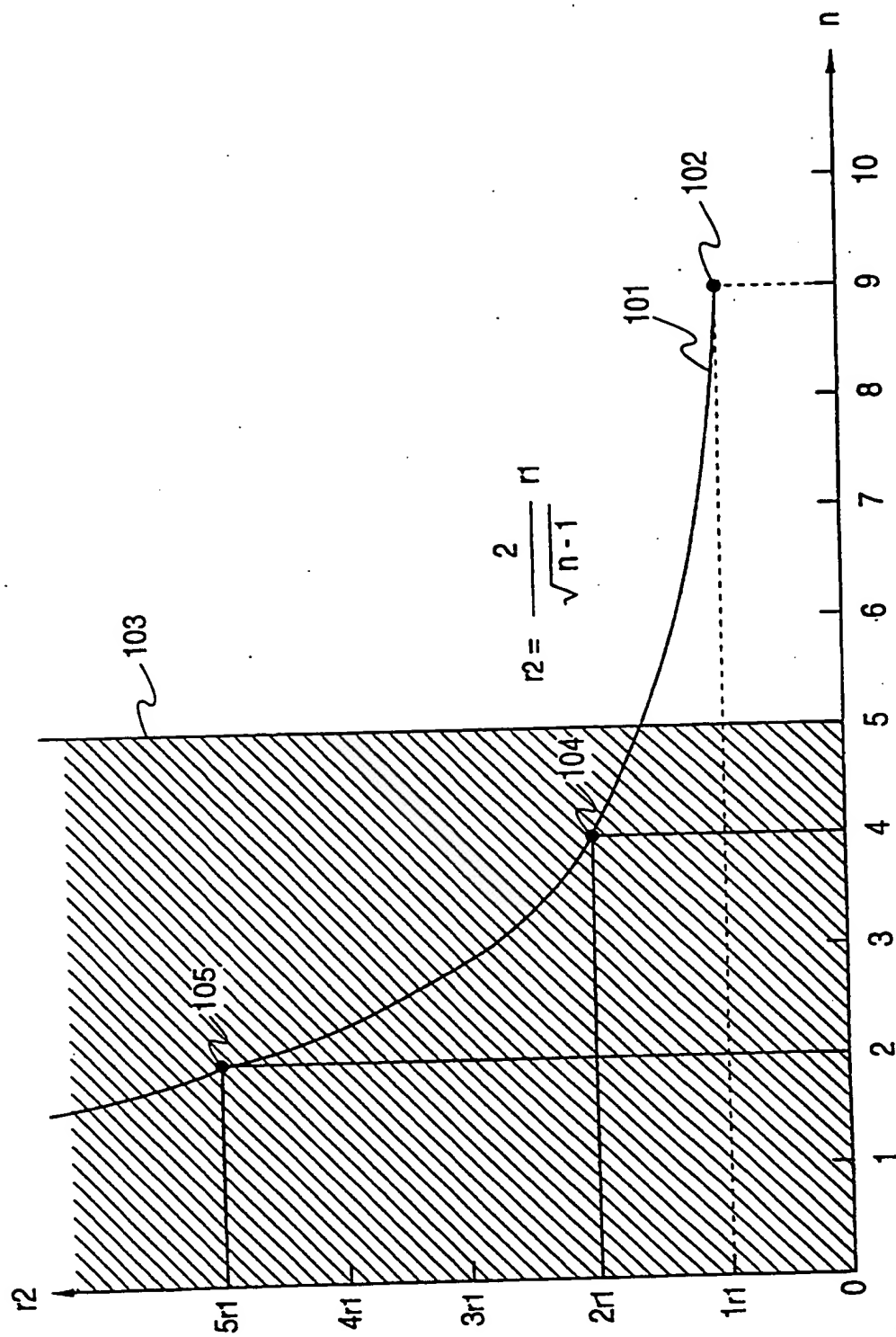


FIG. 12

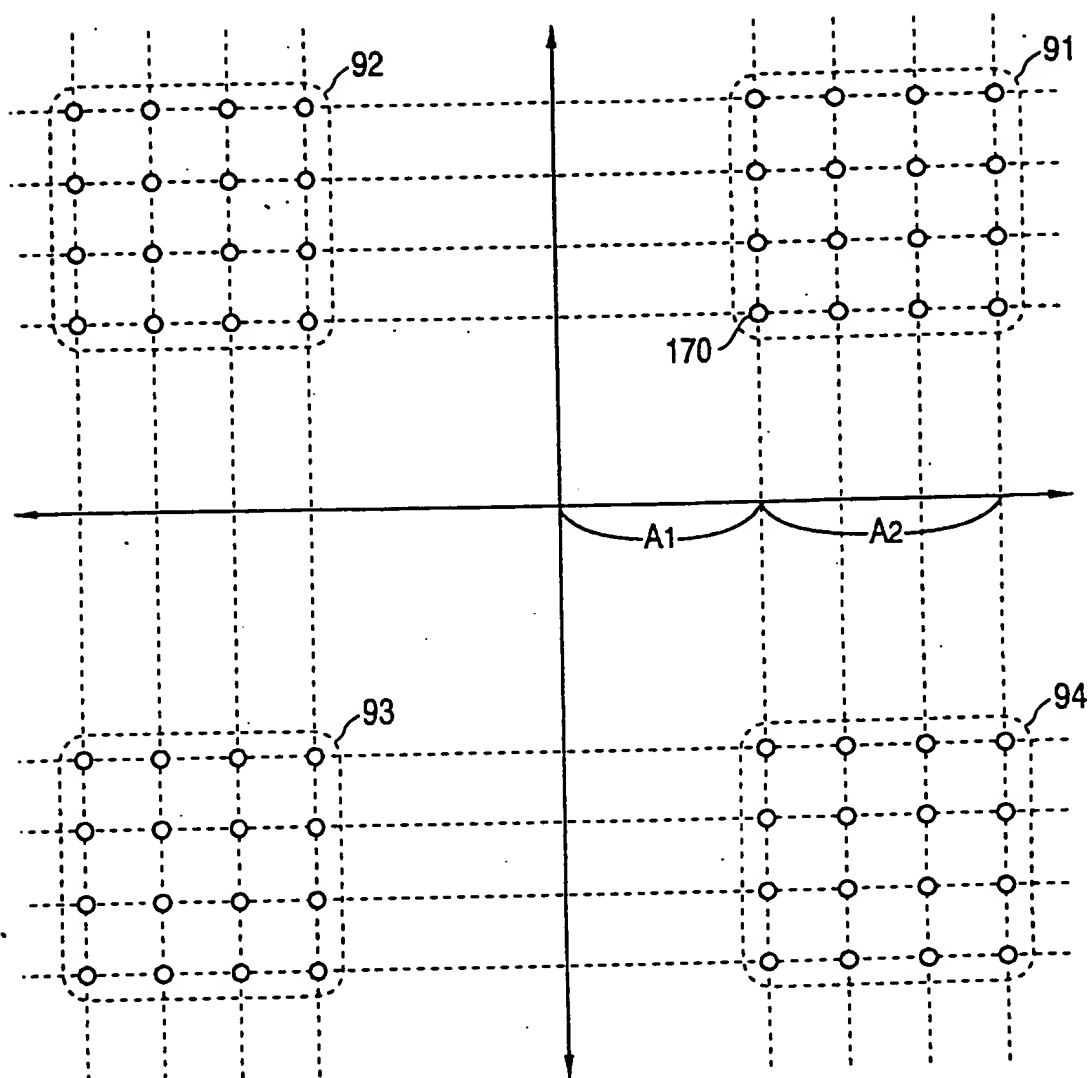


FIG. 13

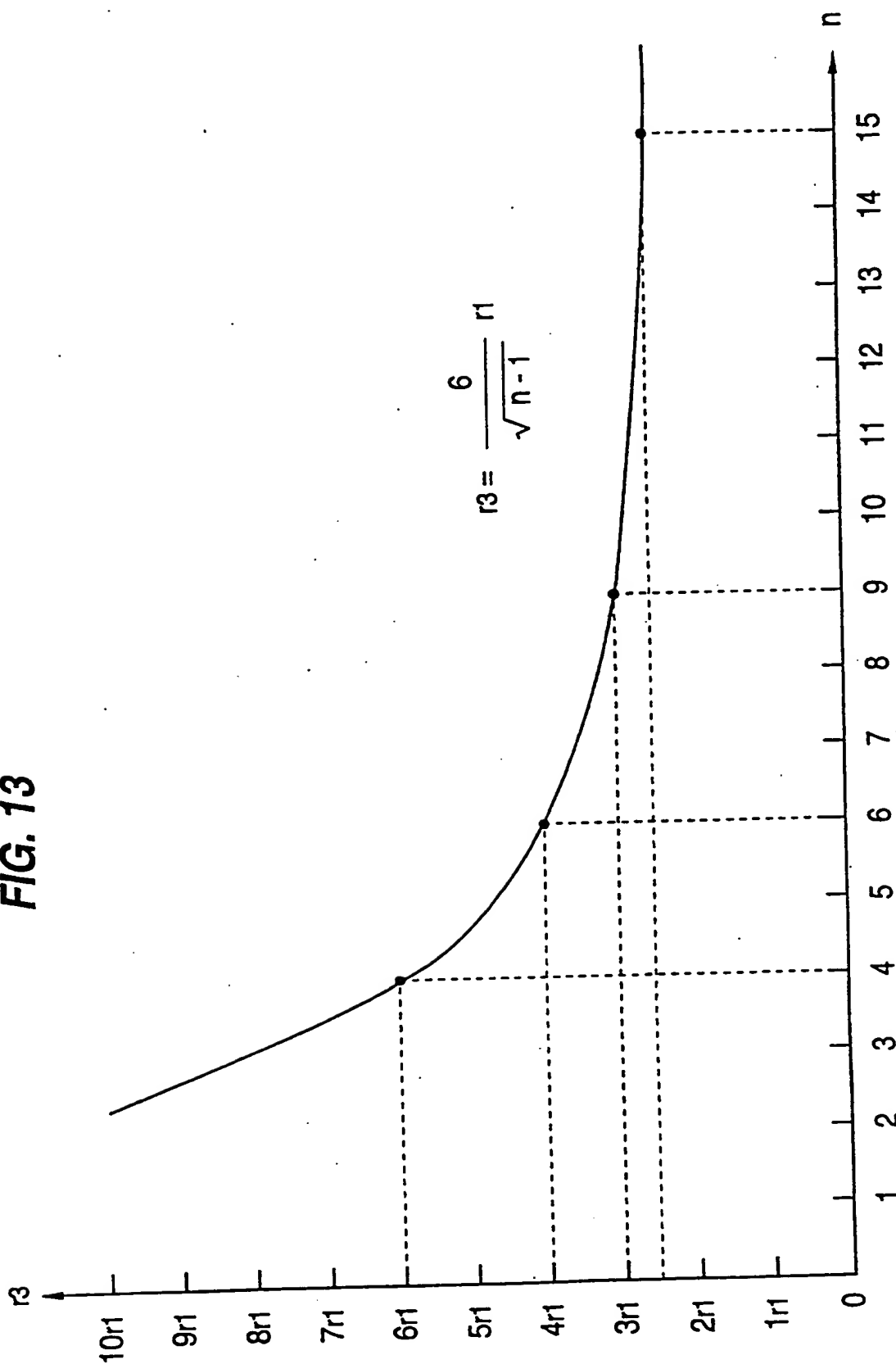


FIG. 14

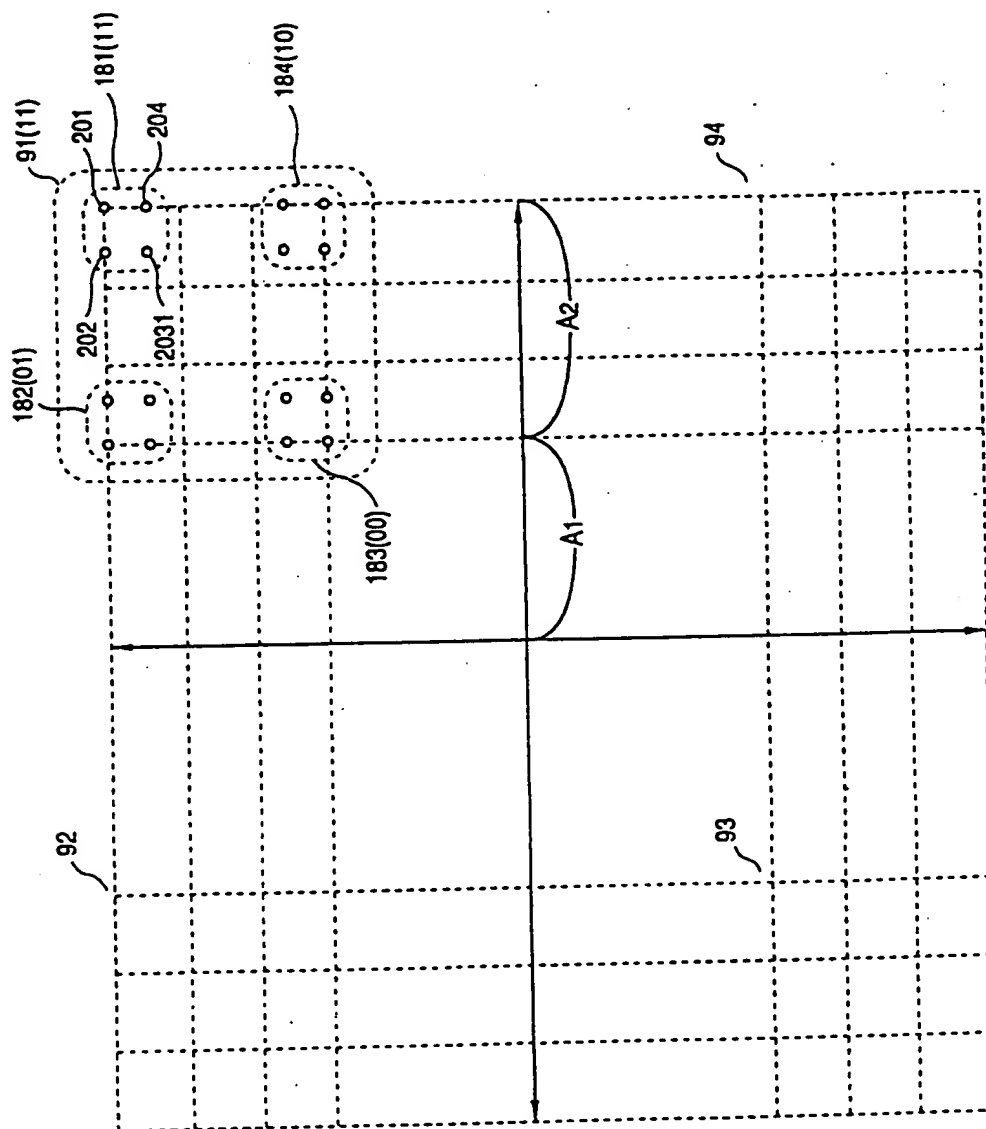


FIG. 15

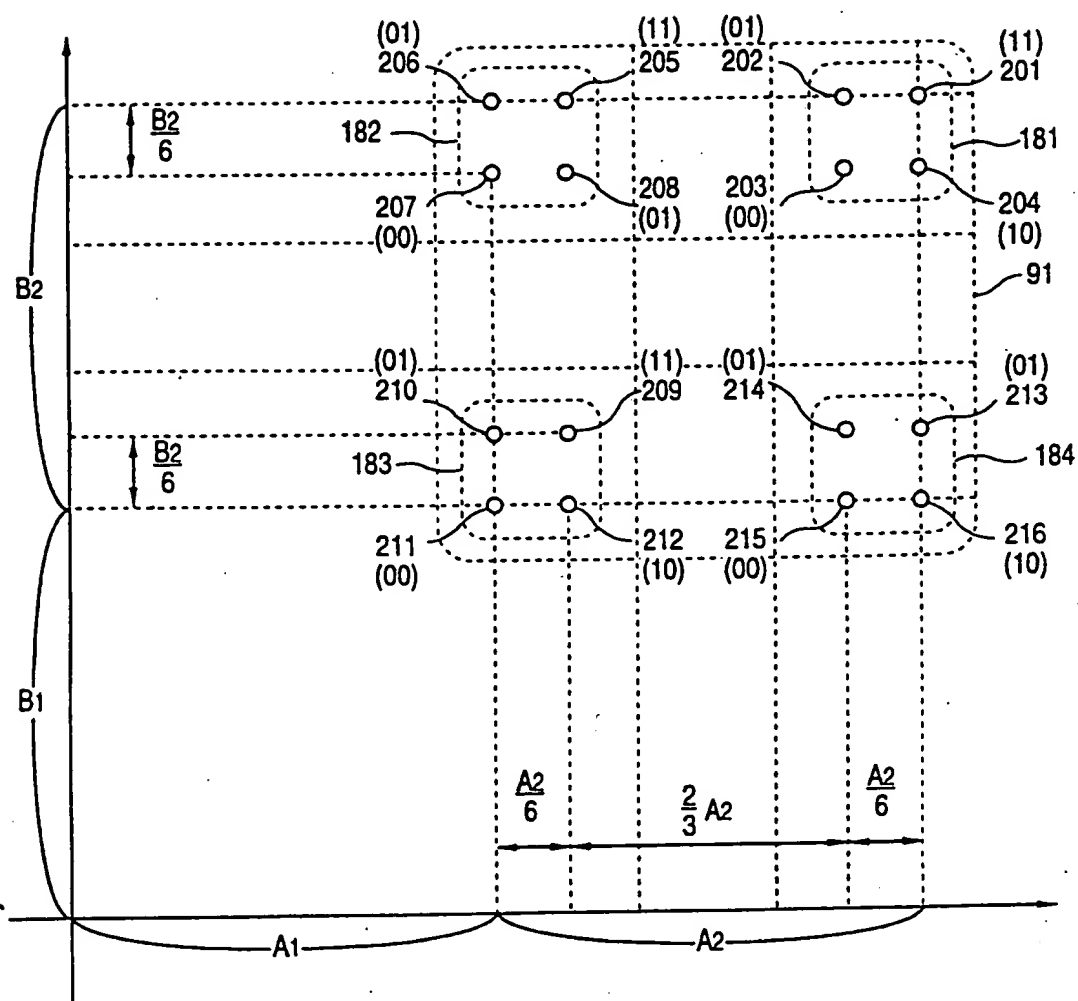


FIG. 16

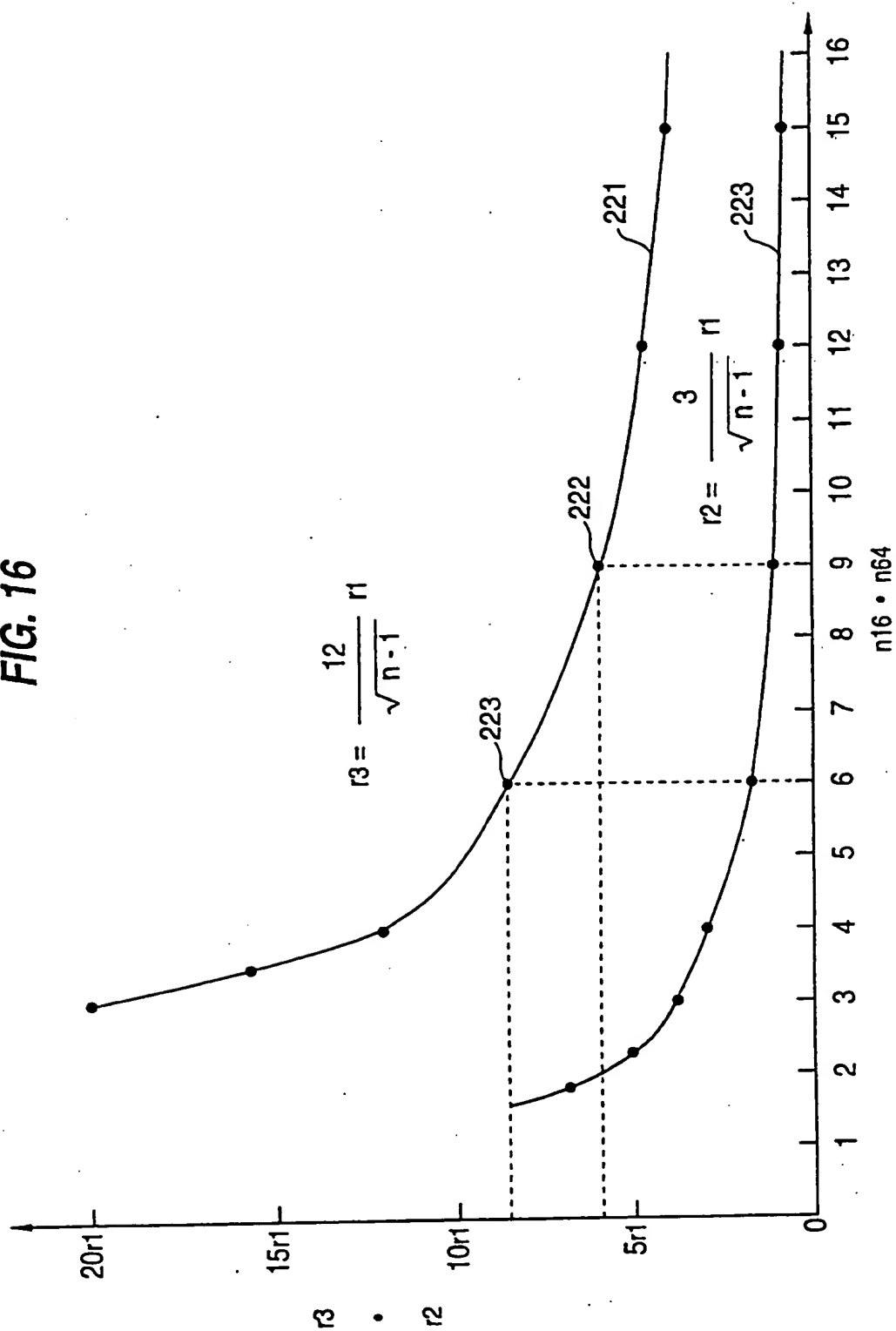


FIG. 17 (Amended)

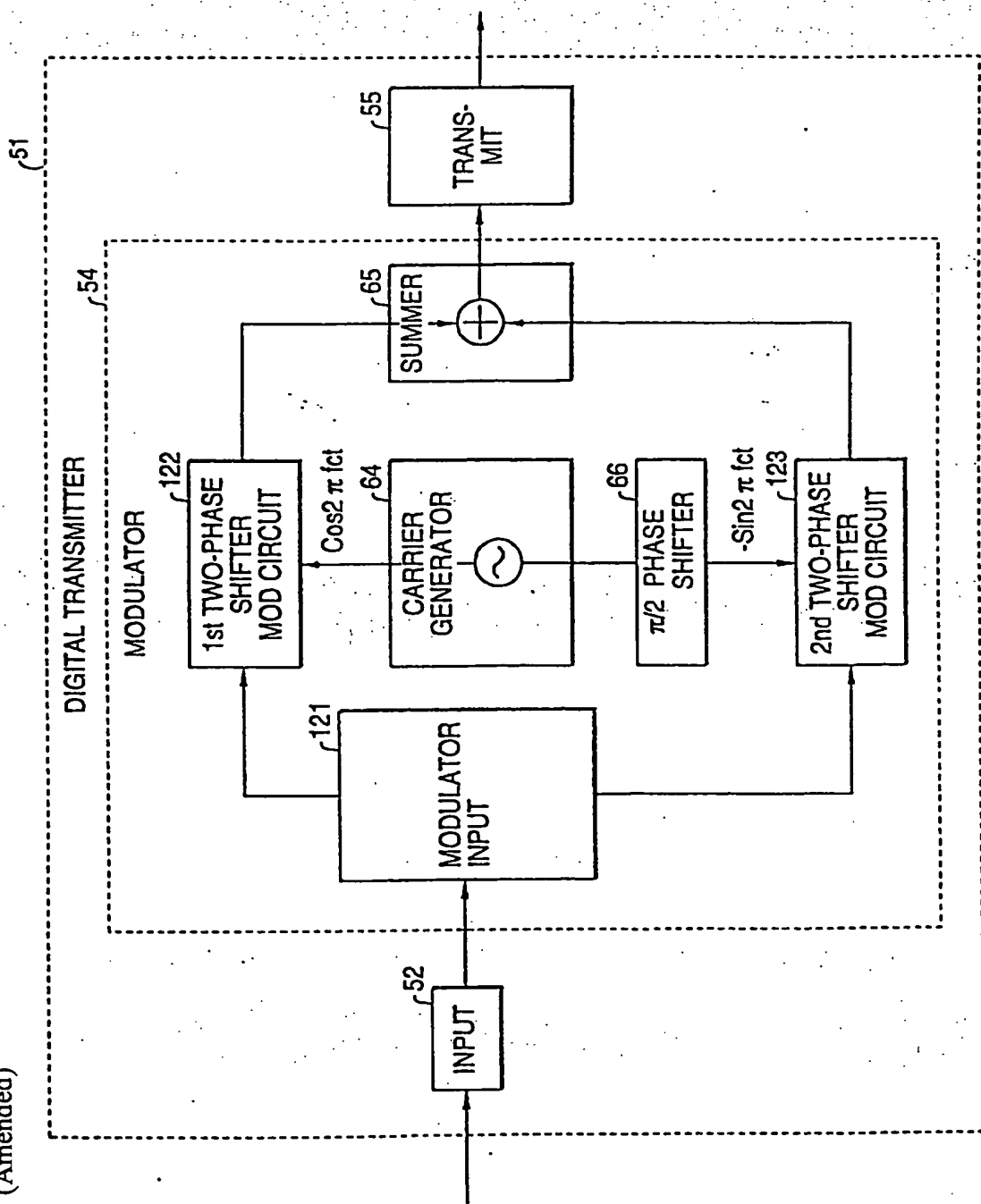


FIG. 18

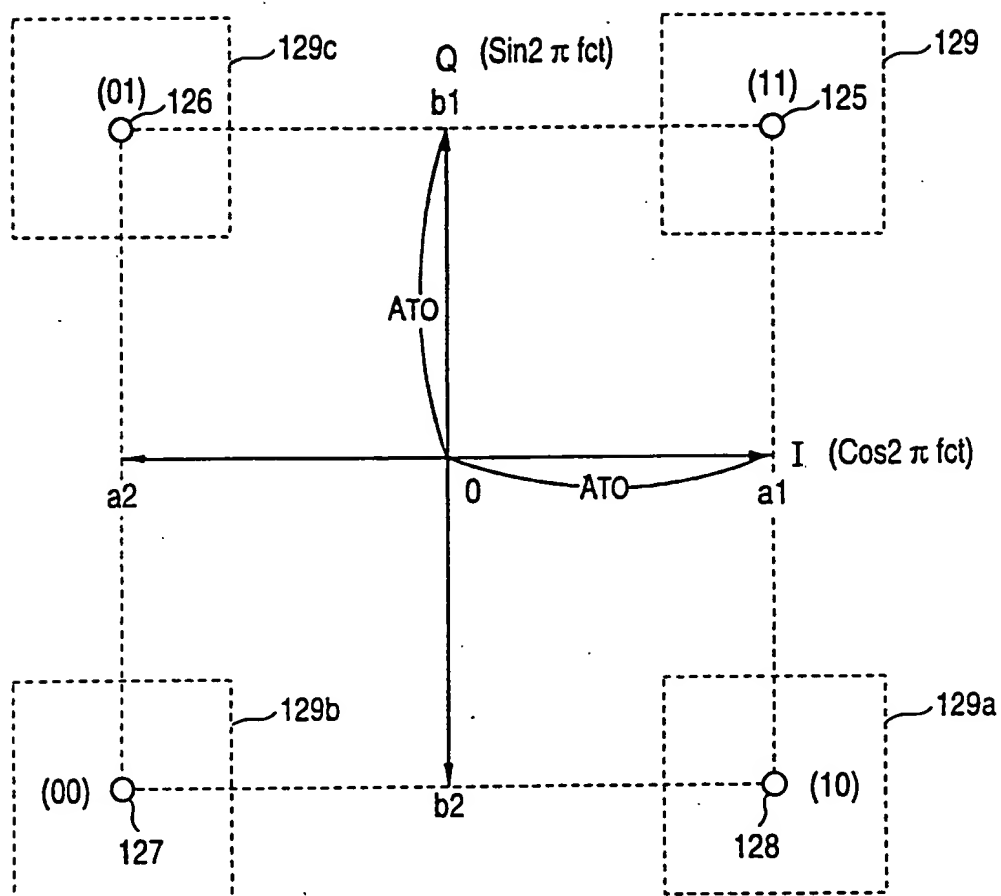


FIG. 19

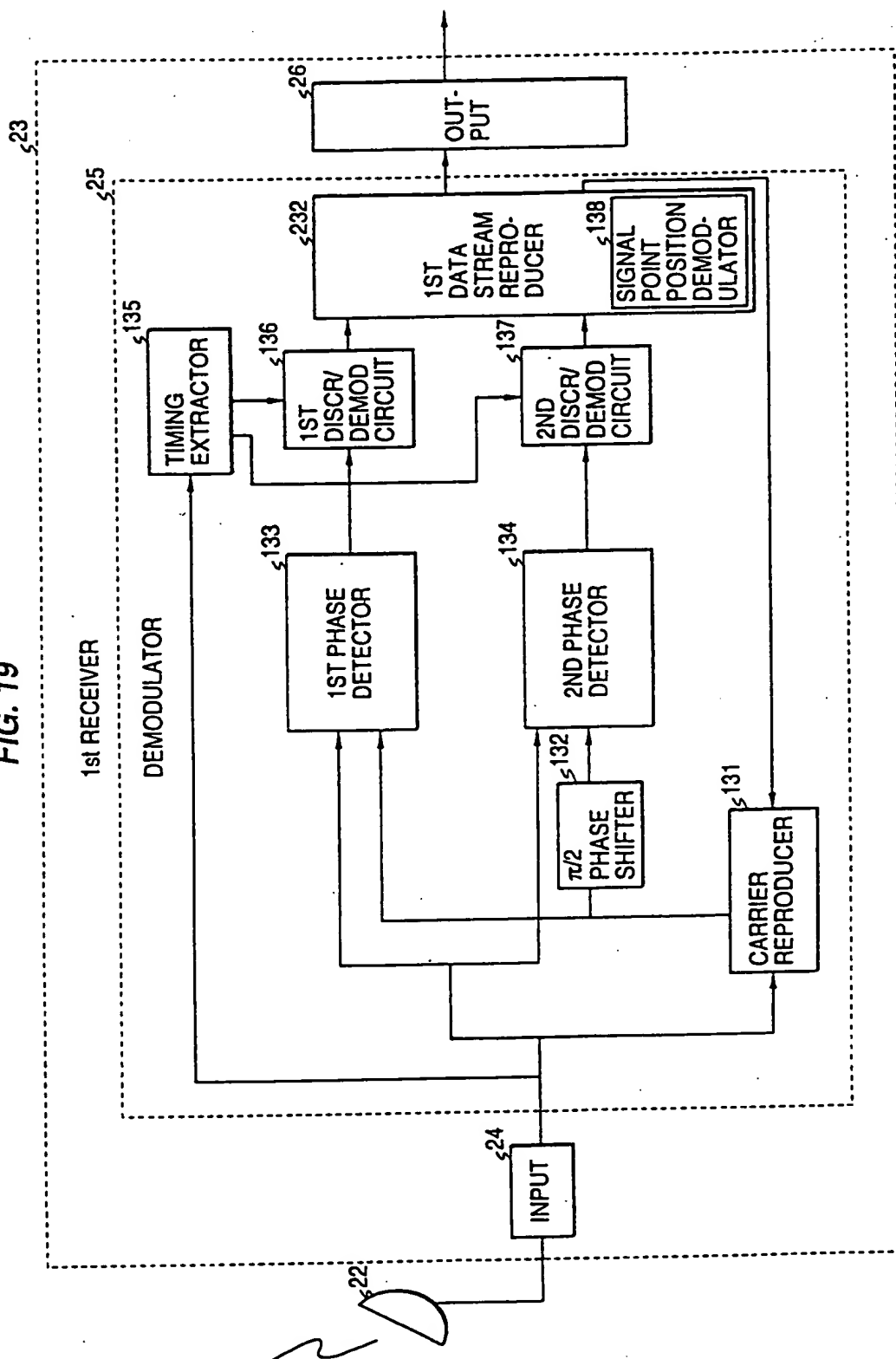


FIG. 20

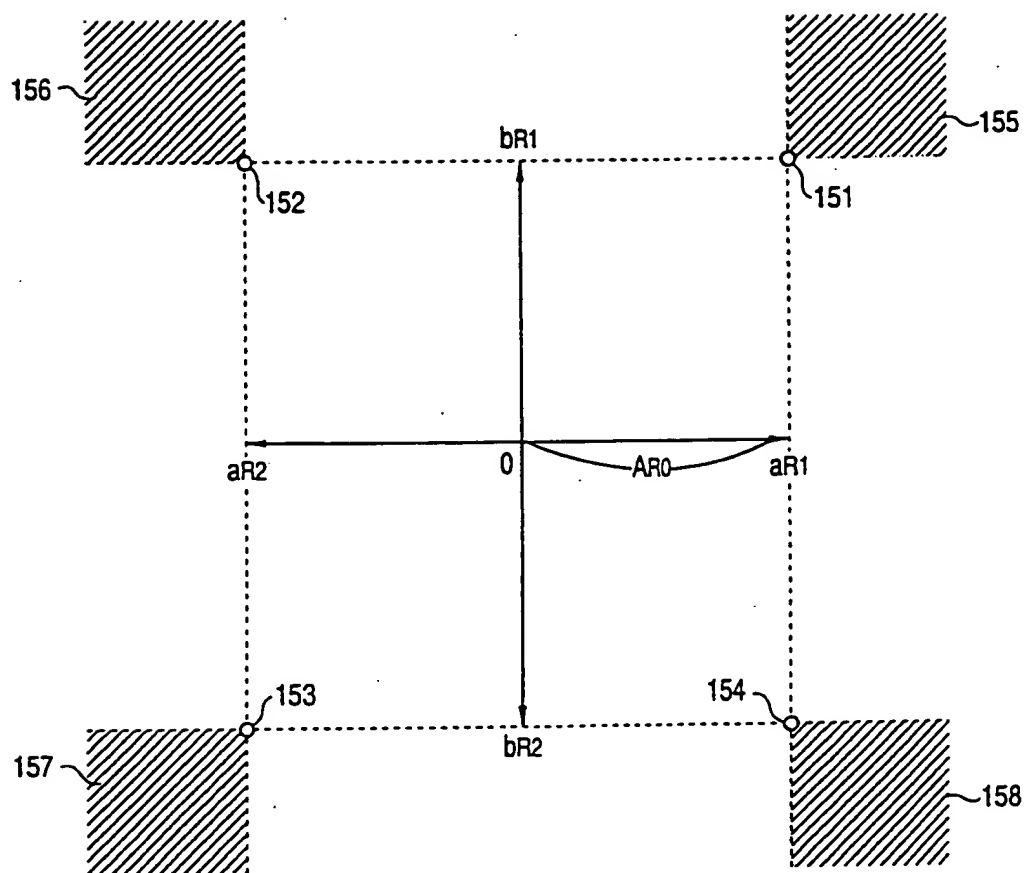


FIG. 21

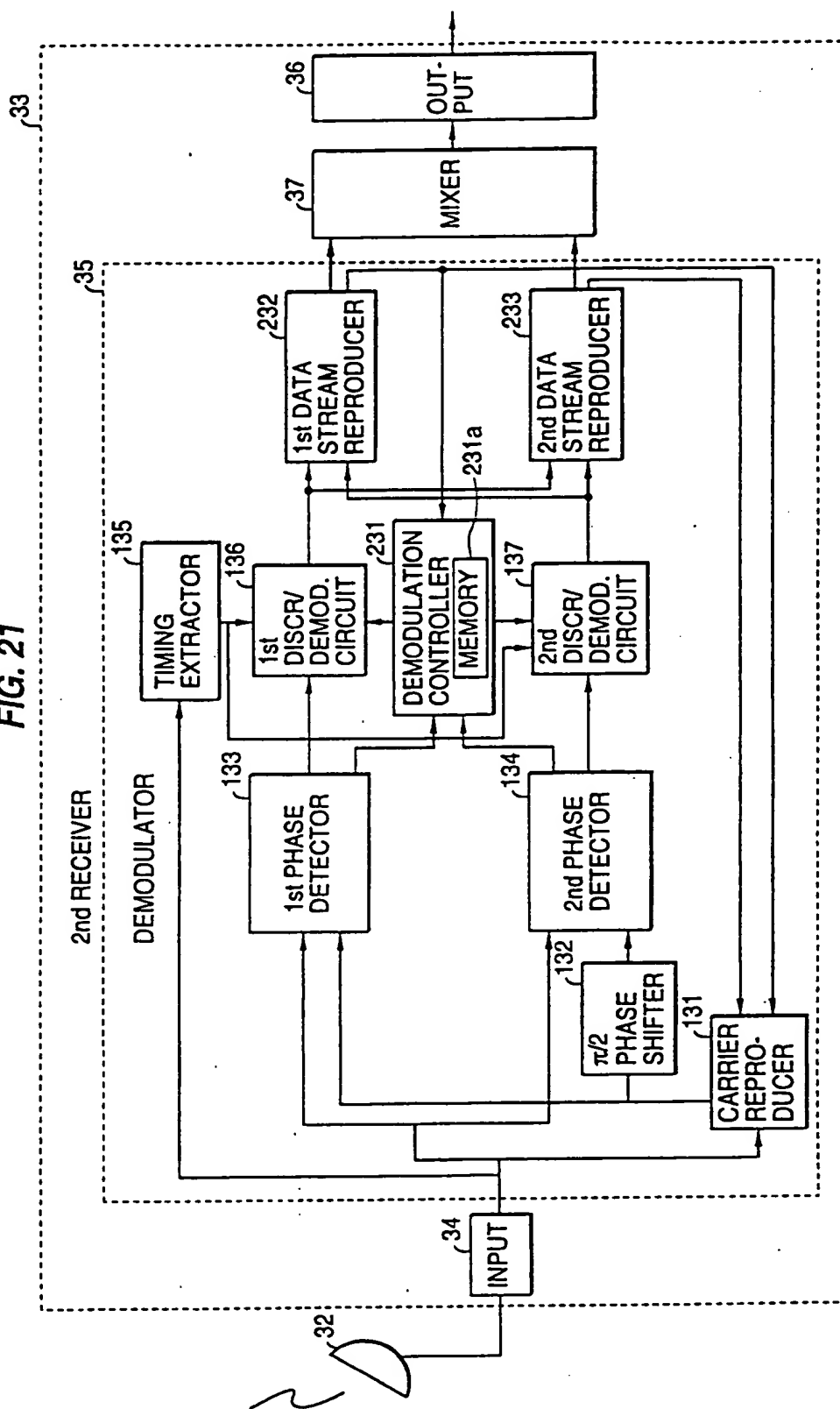


FIG. 22

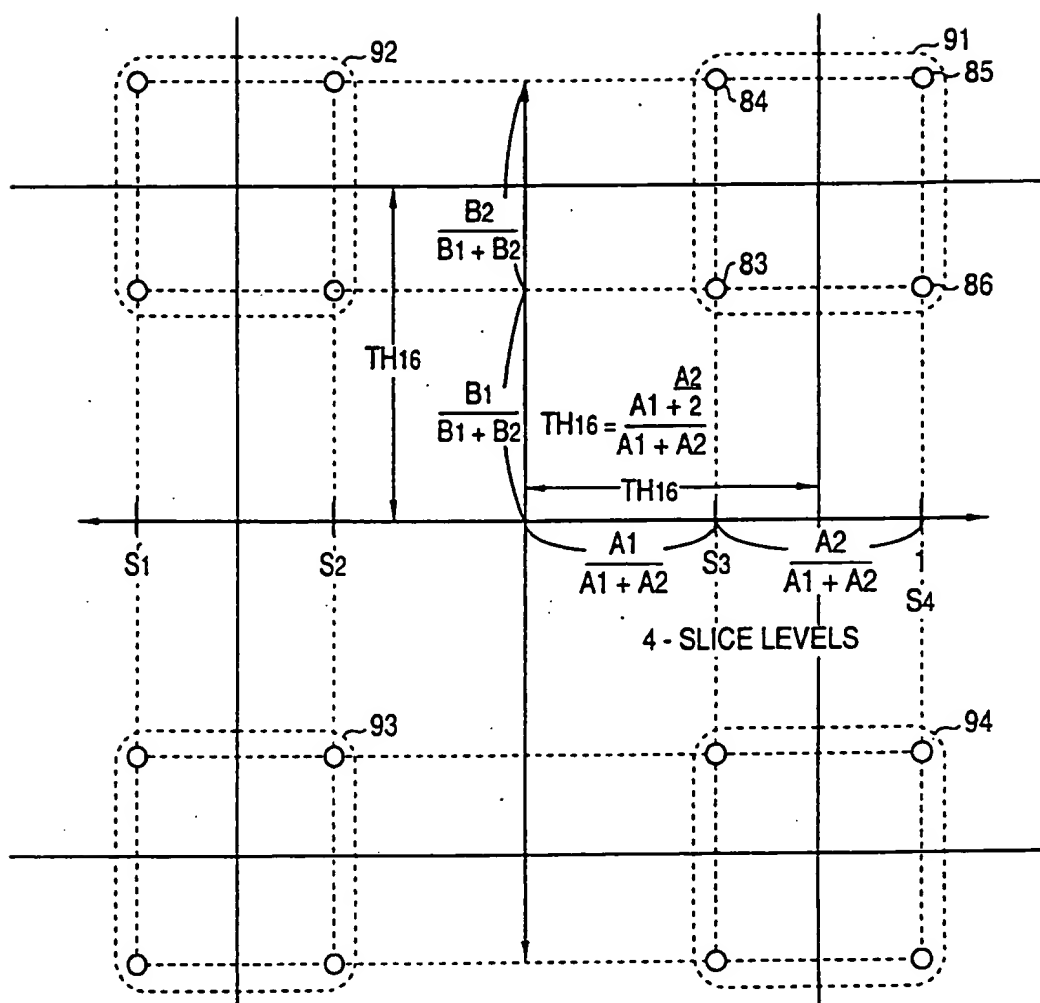


FIG. 23

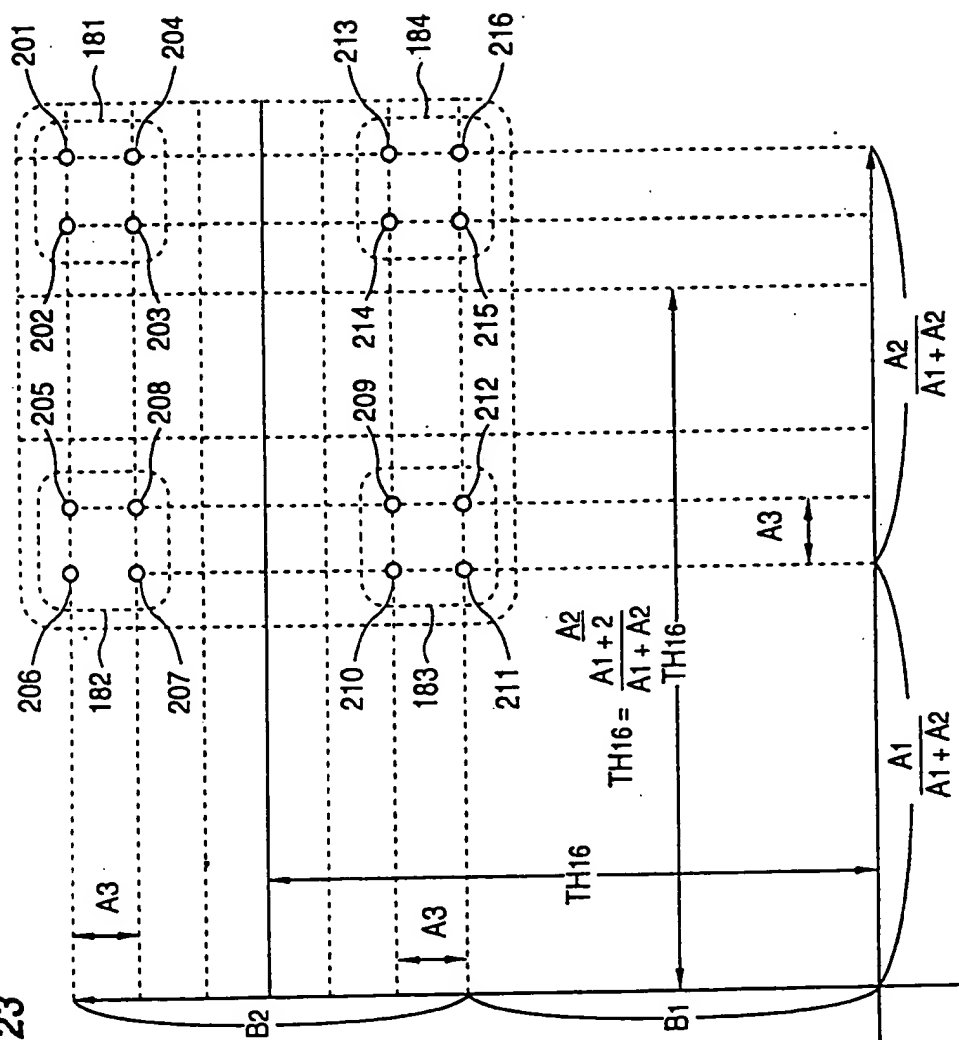


FIG. 24

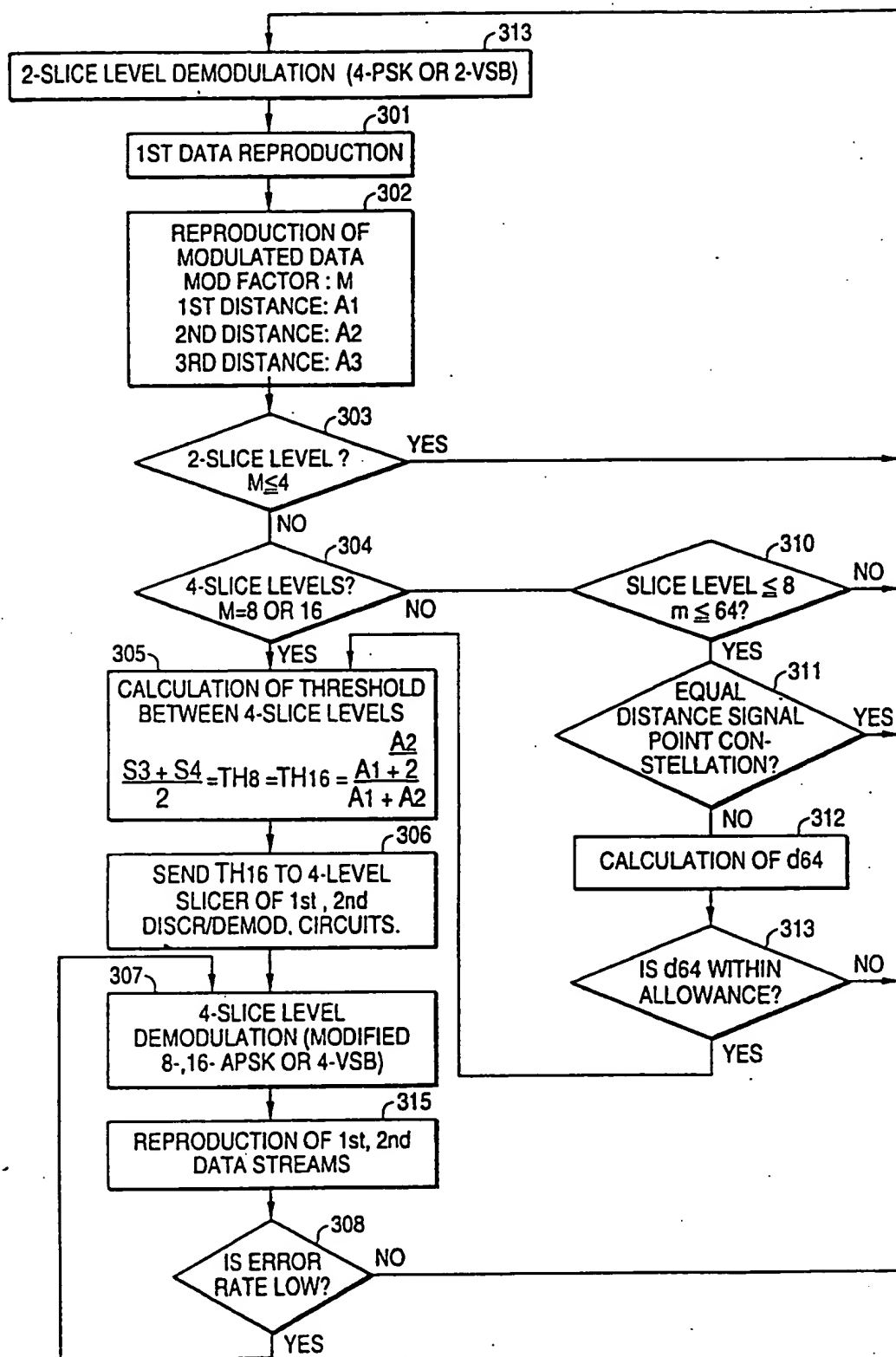


FIG. 25(a)

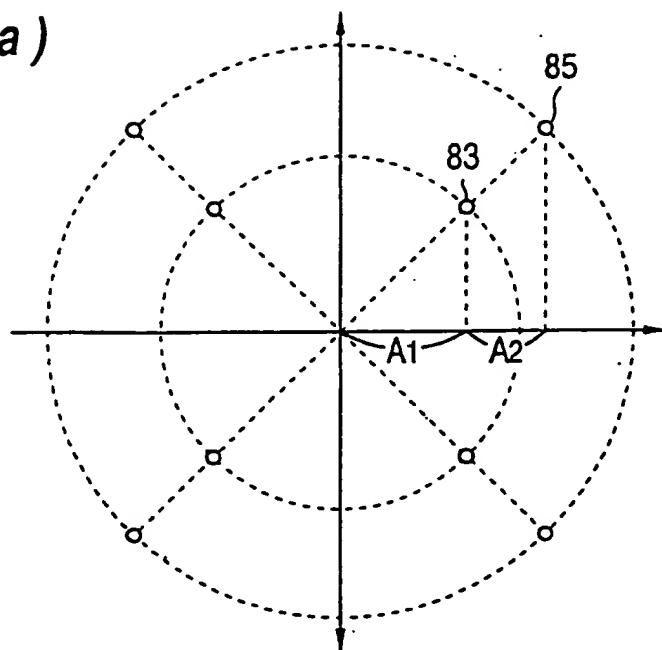


FIG. 25(b)

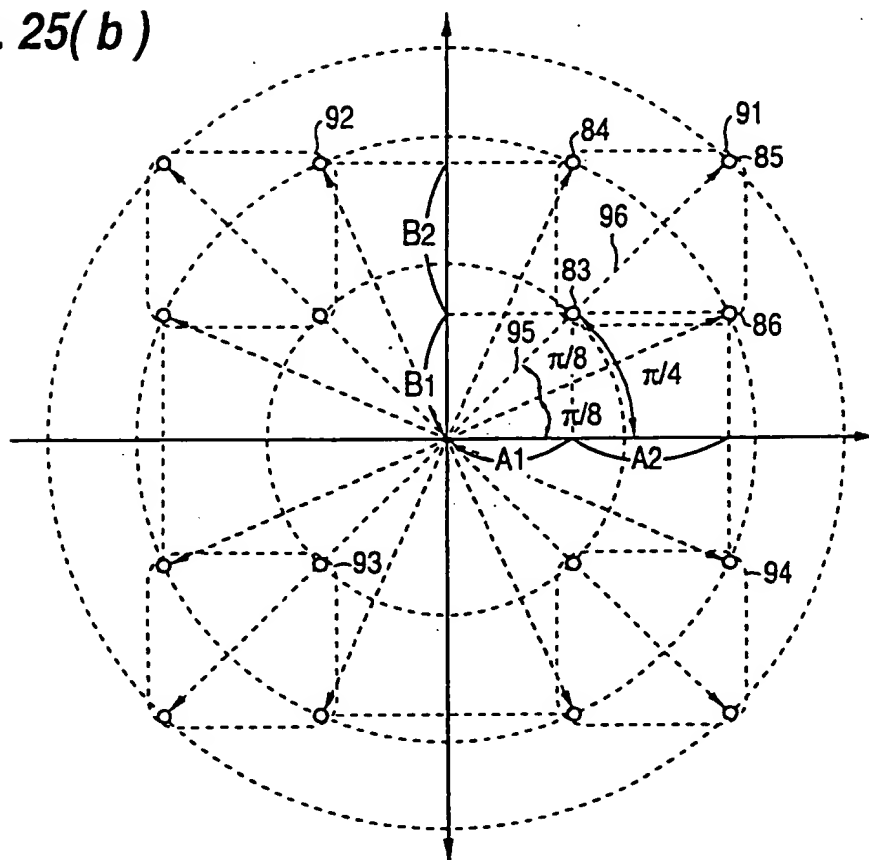
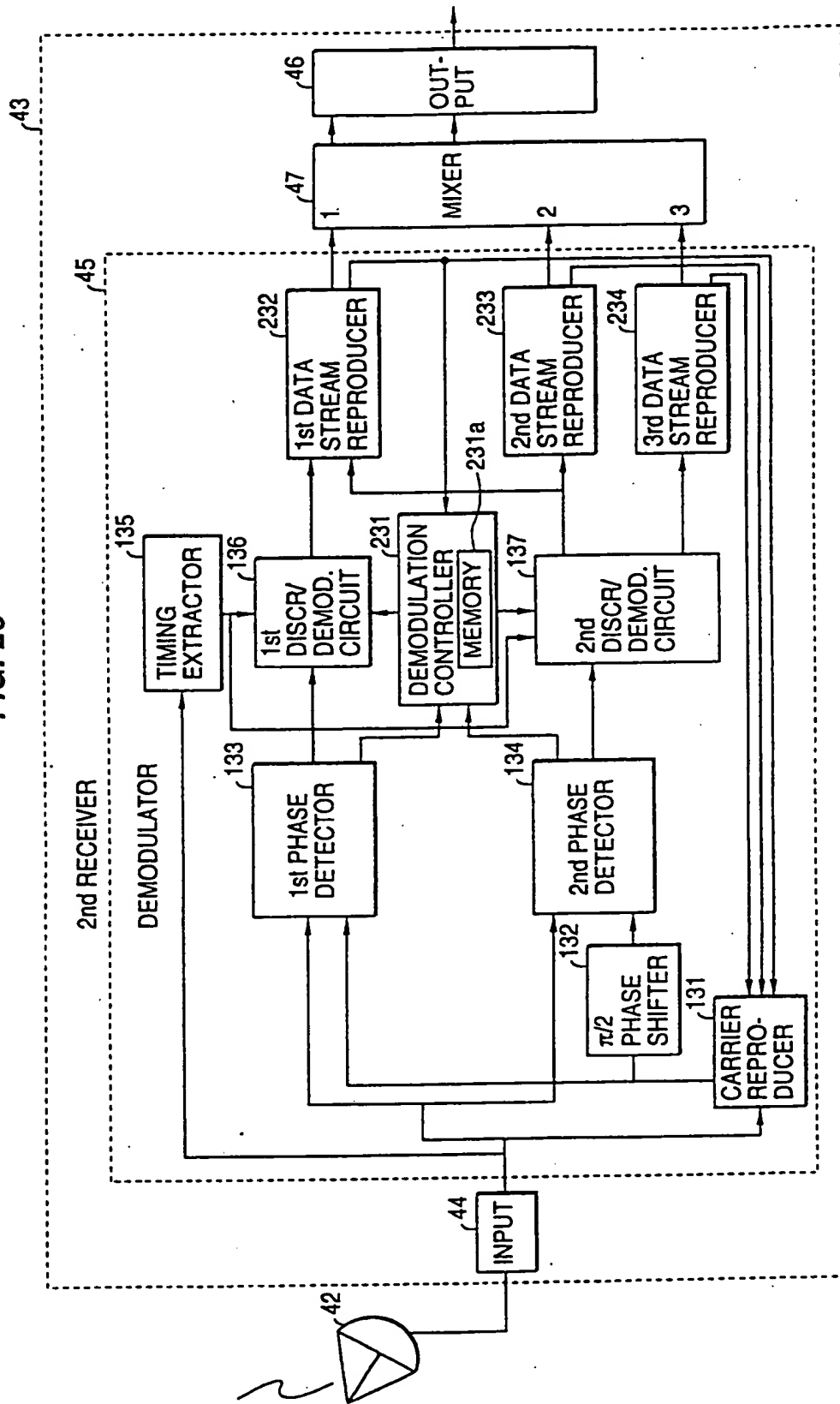


FIG. 26



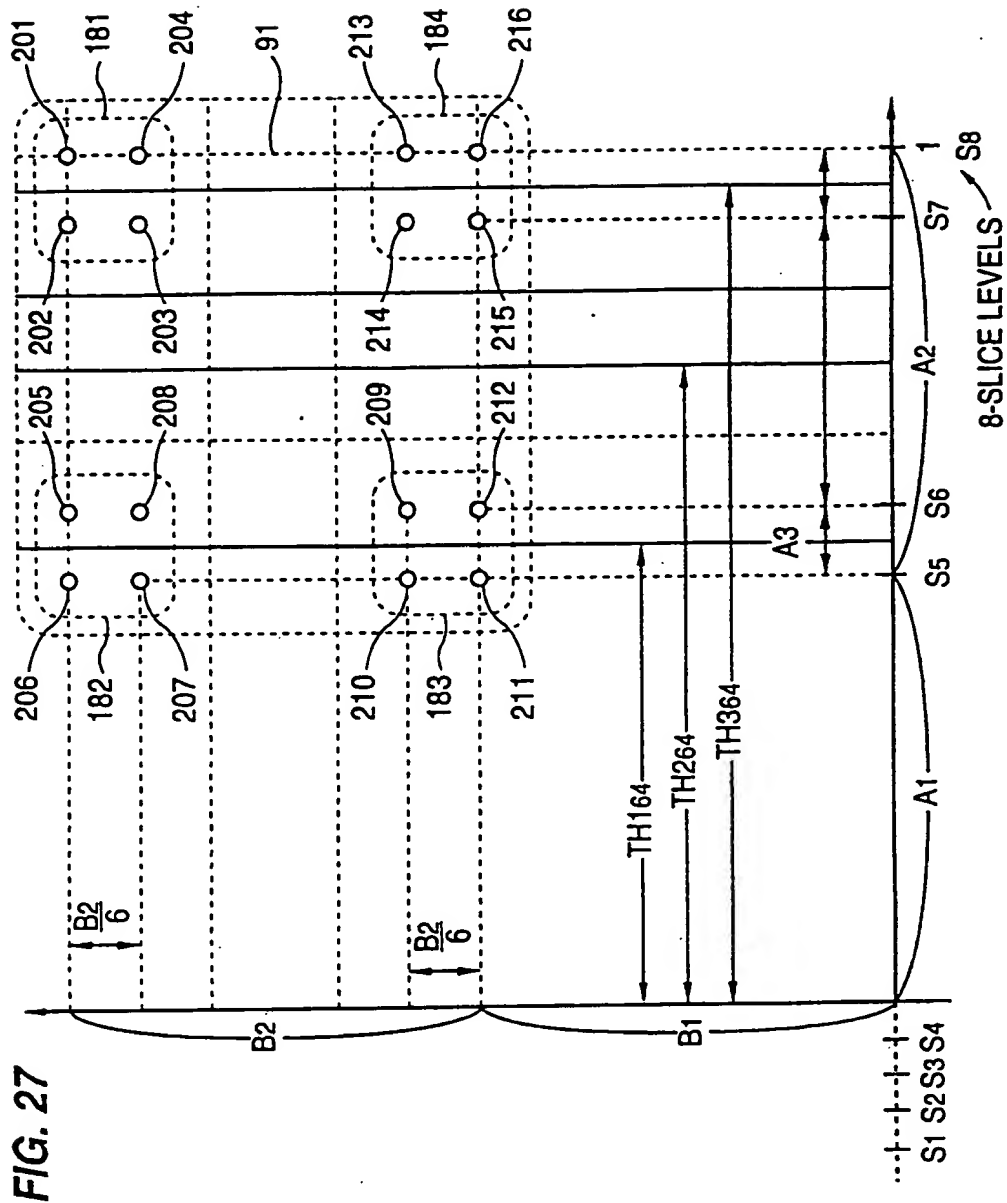


FIG. 28

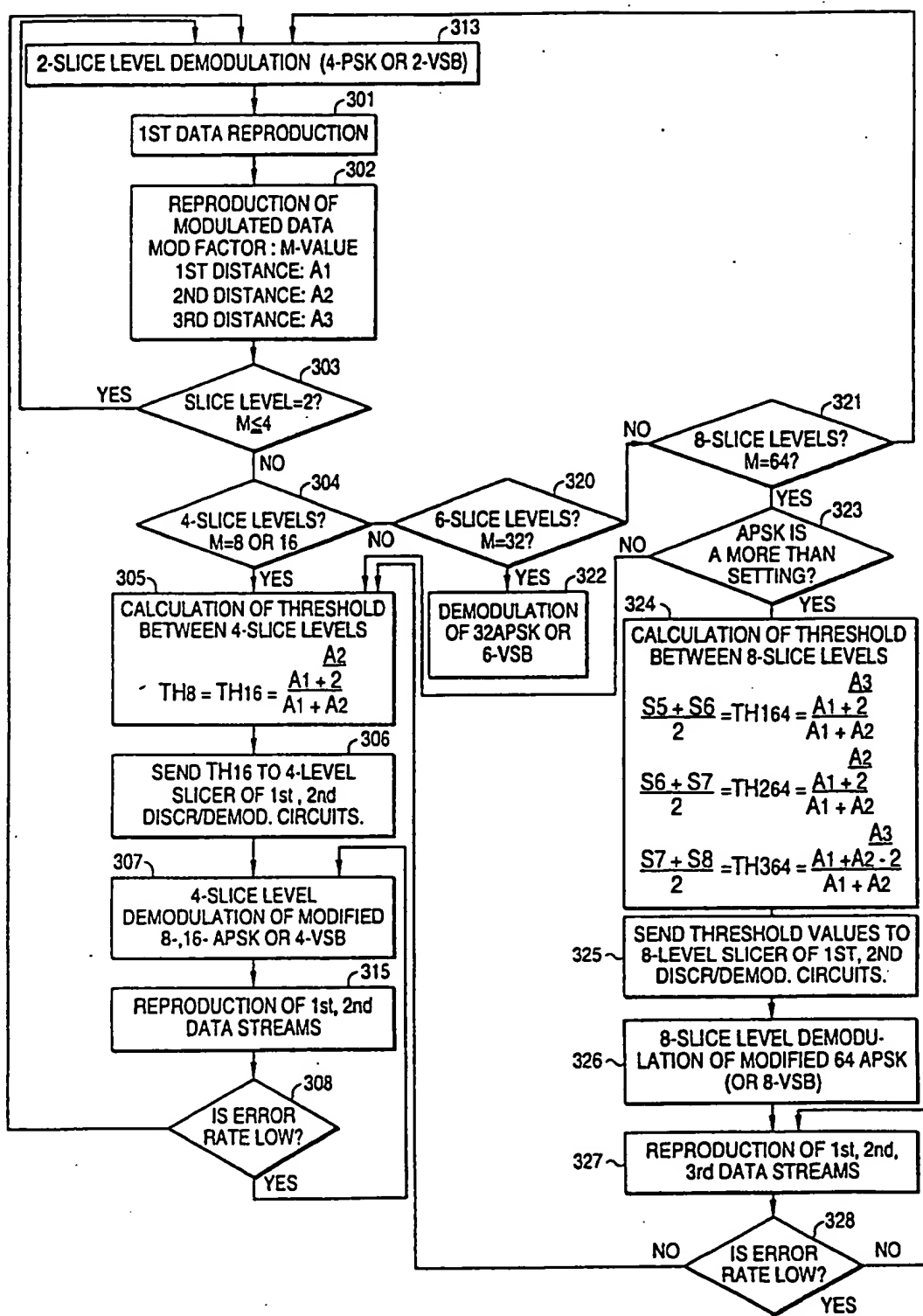


FIG. 29 (Amended)

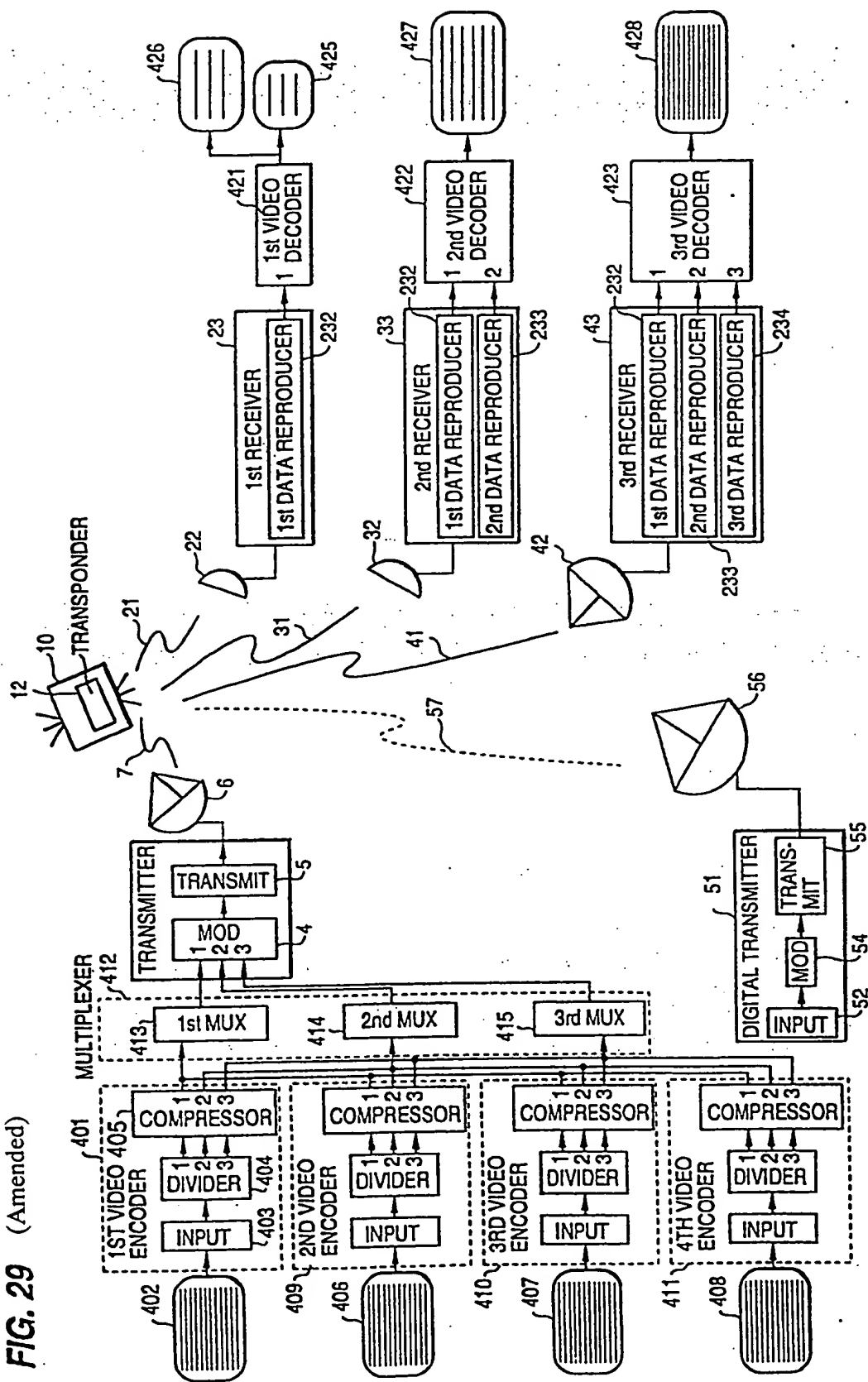


FIG. 30

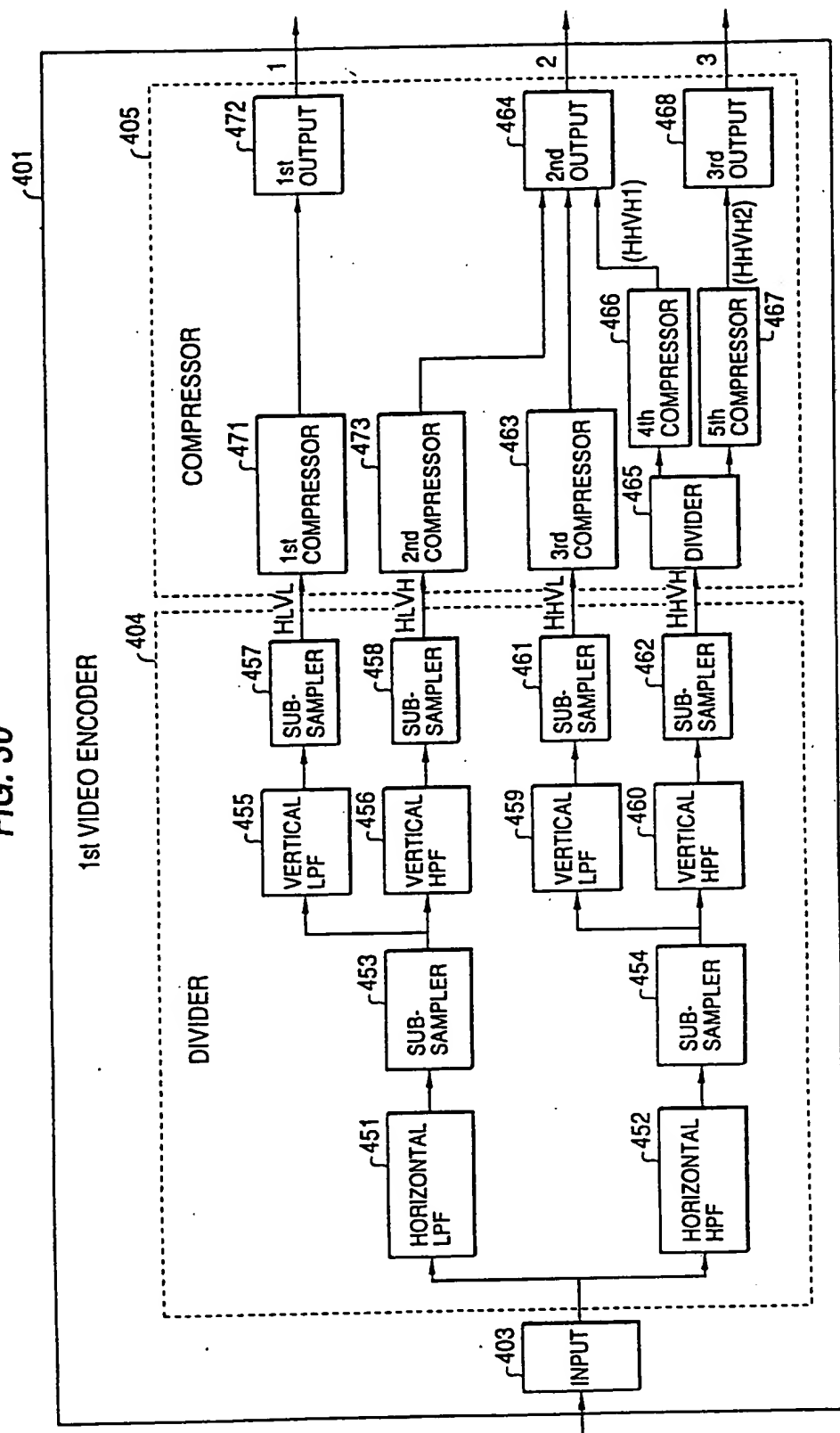


FIG. 31

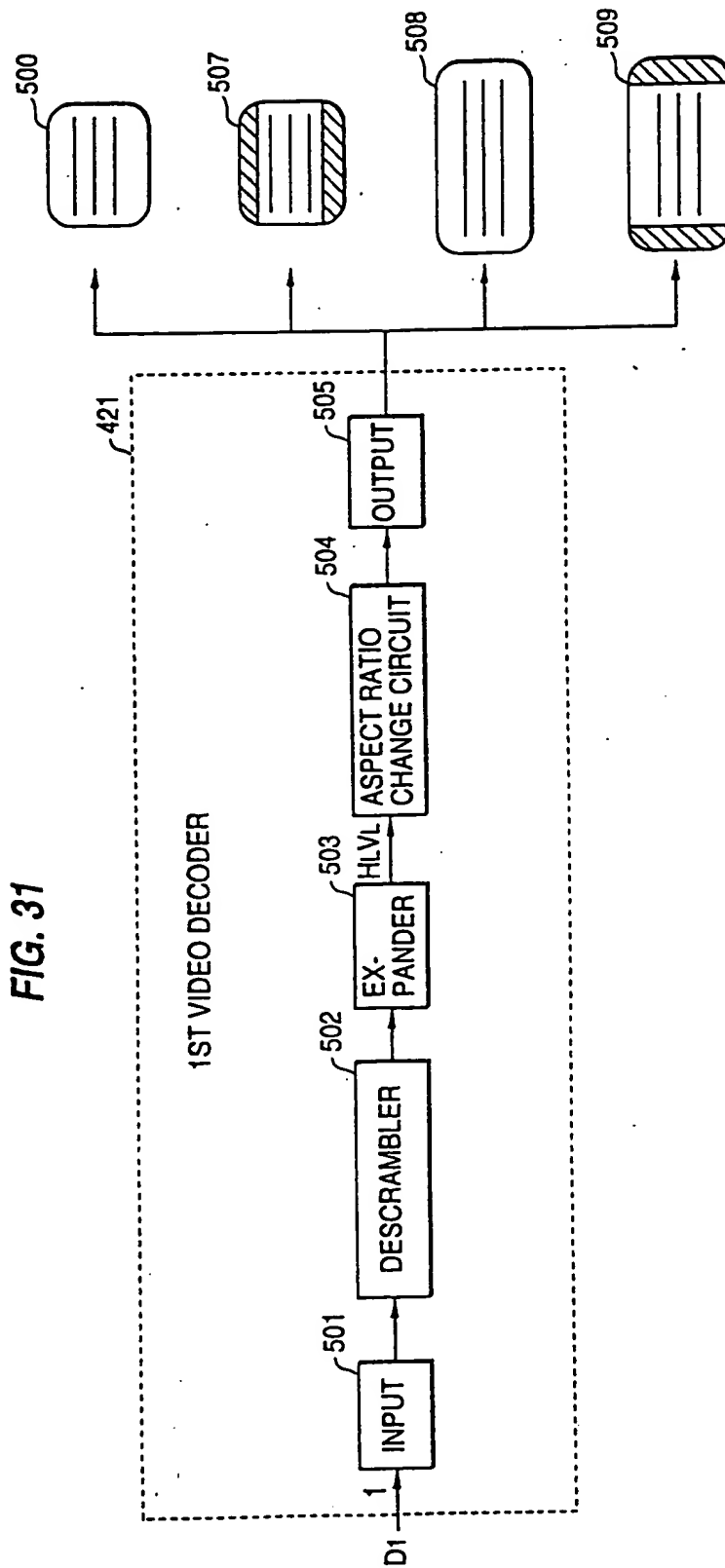


FIG. 32

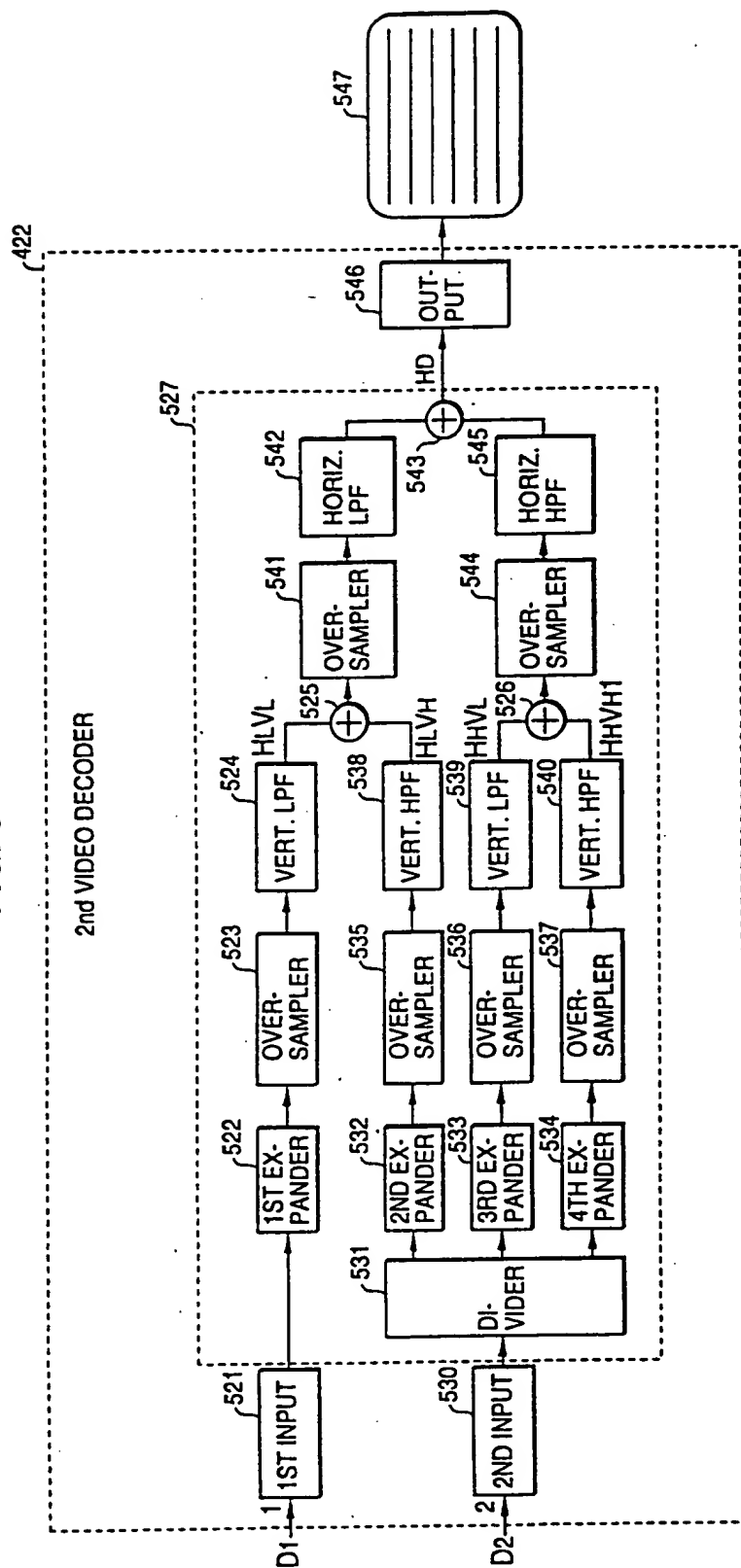


FIG. 33

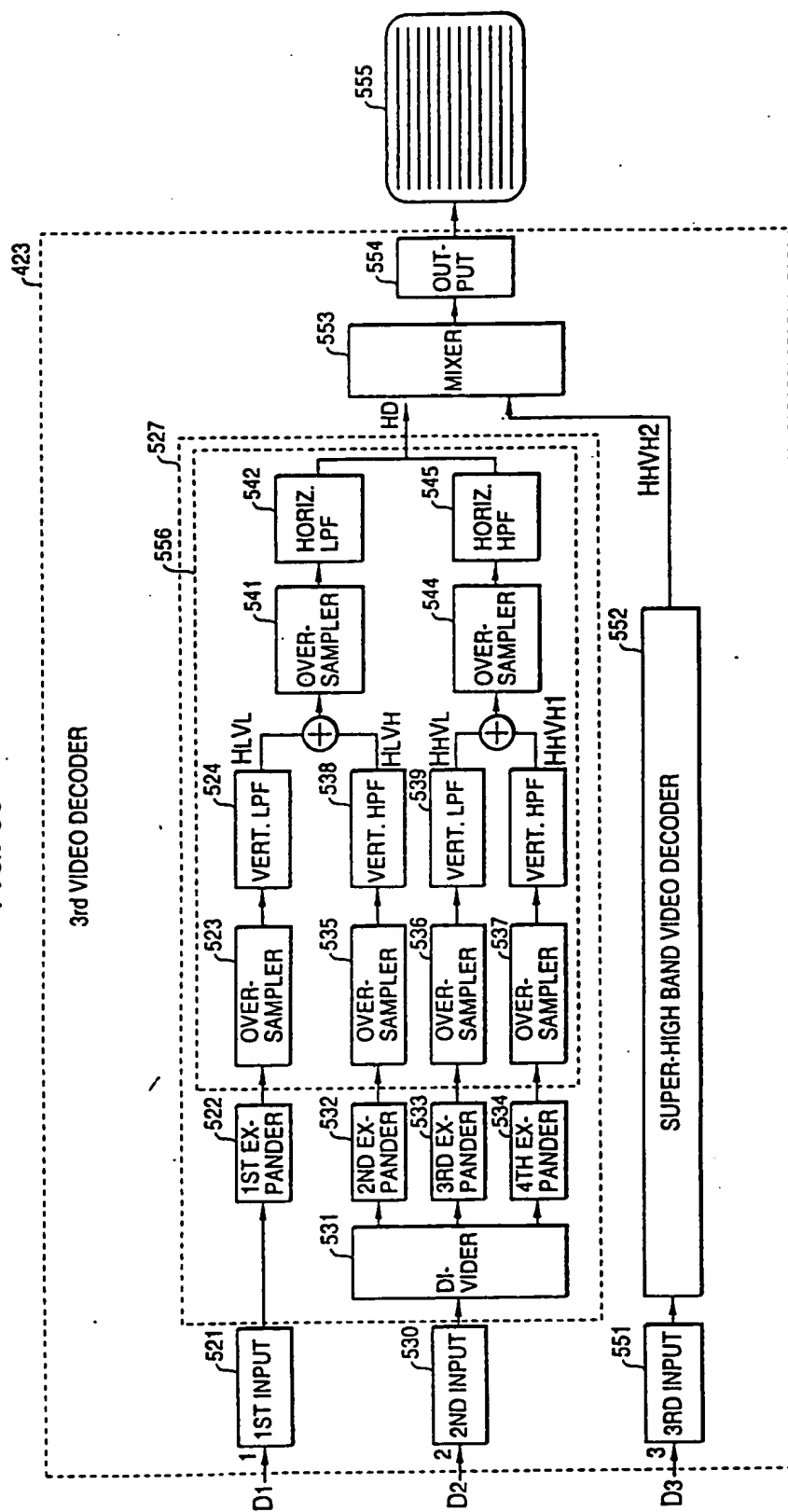


FIG. 34

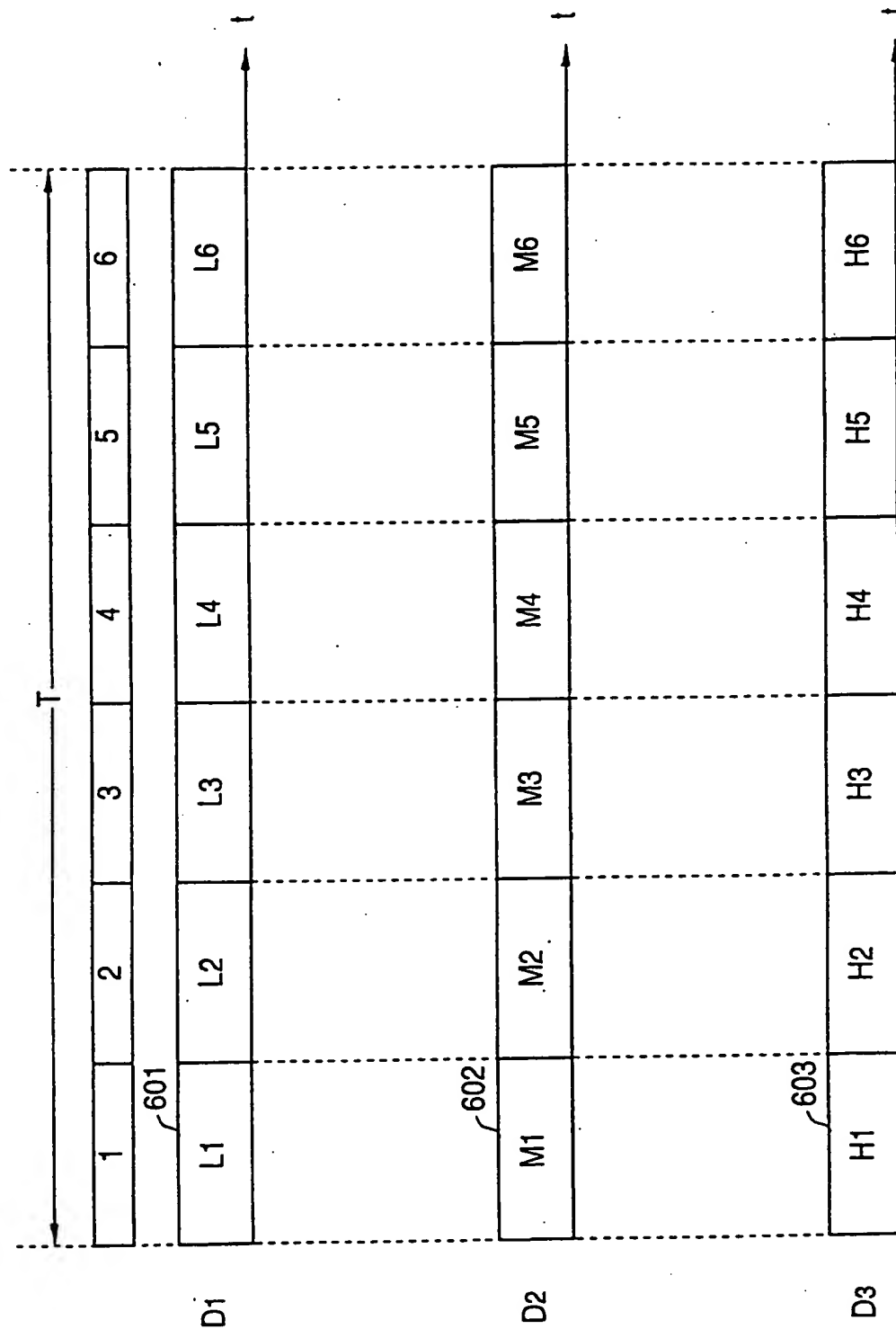


FIG. 35

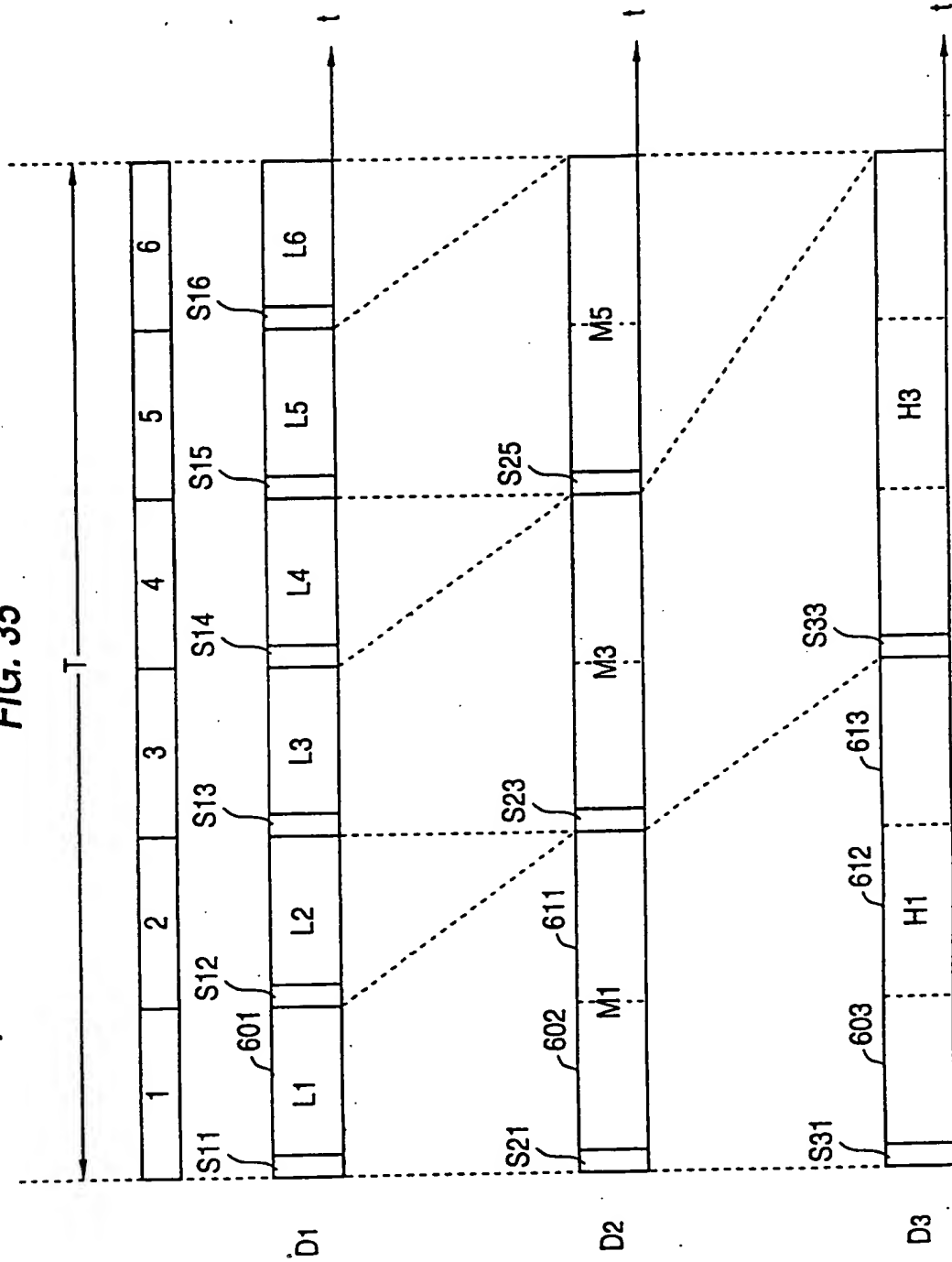


FIG. 36

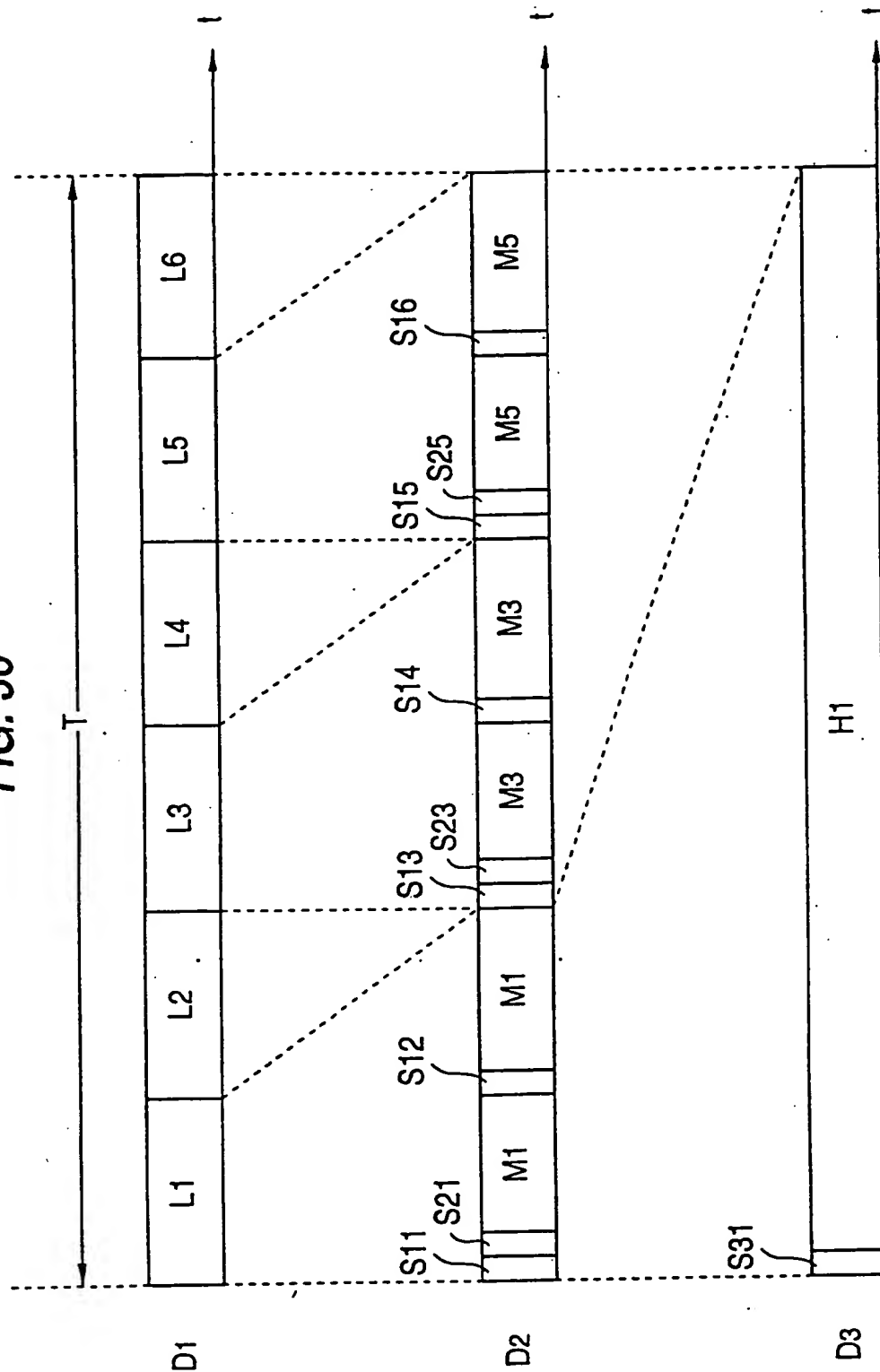


FIG. 37

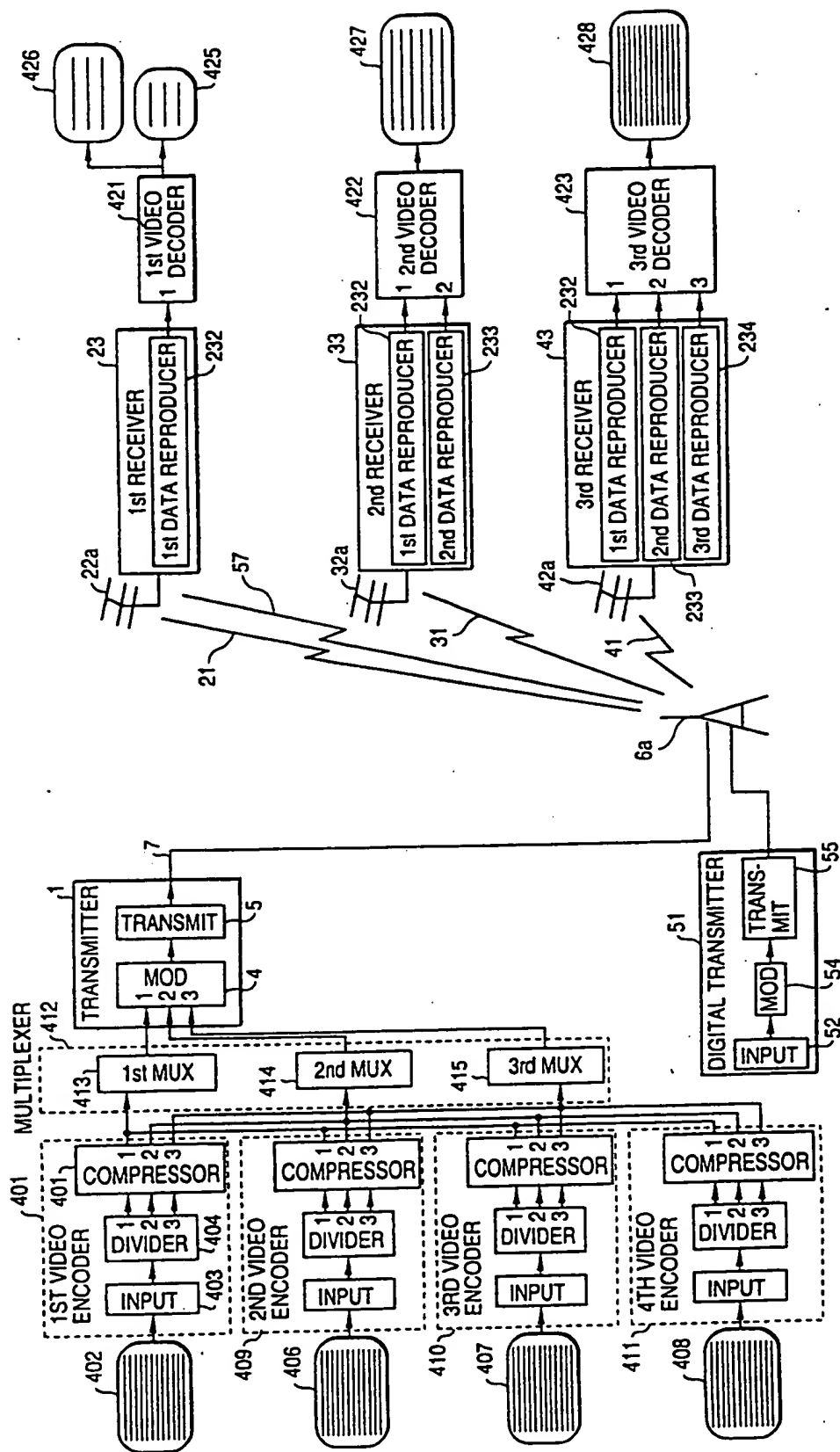


FIG. 38

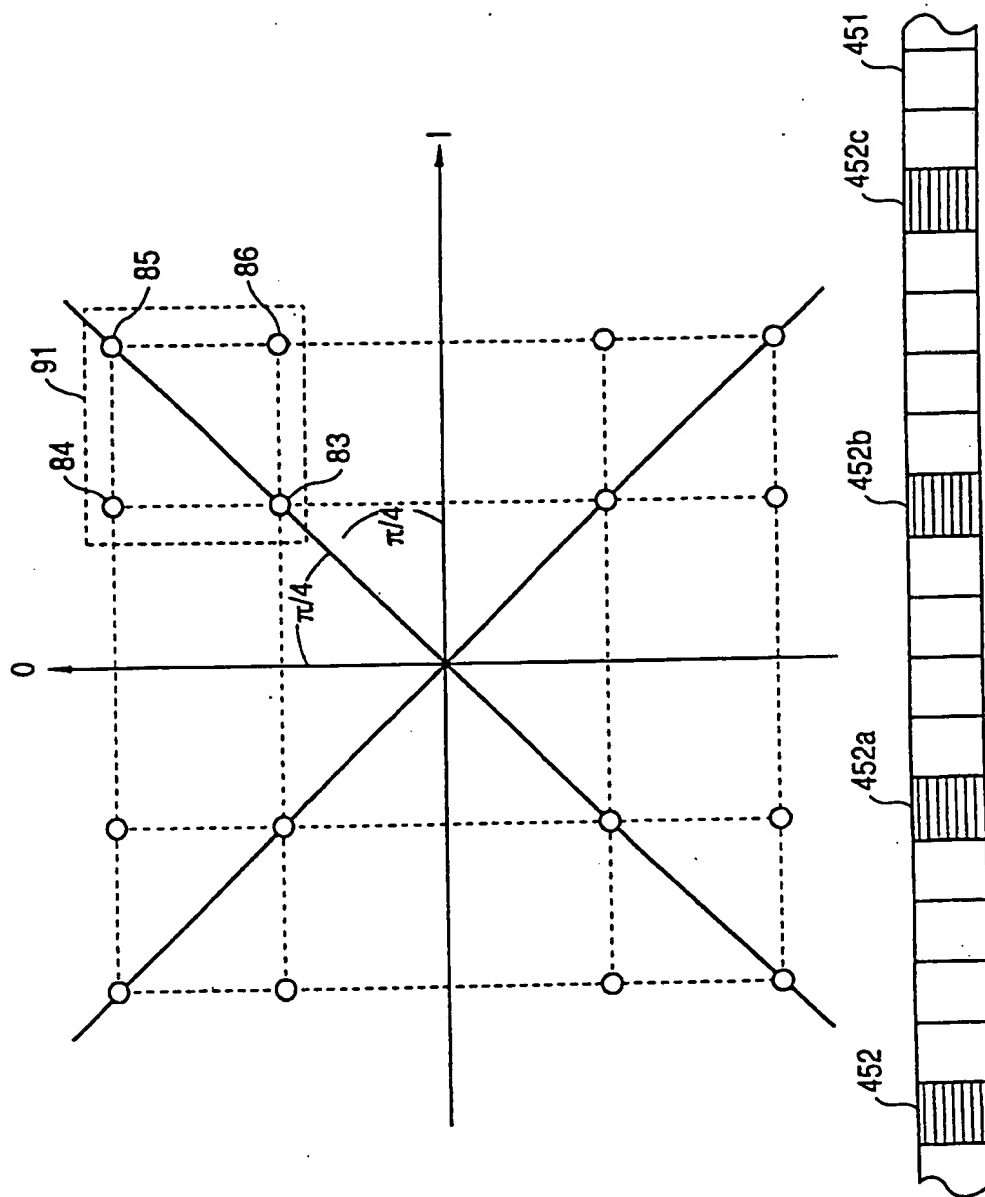


FIG. 39

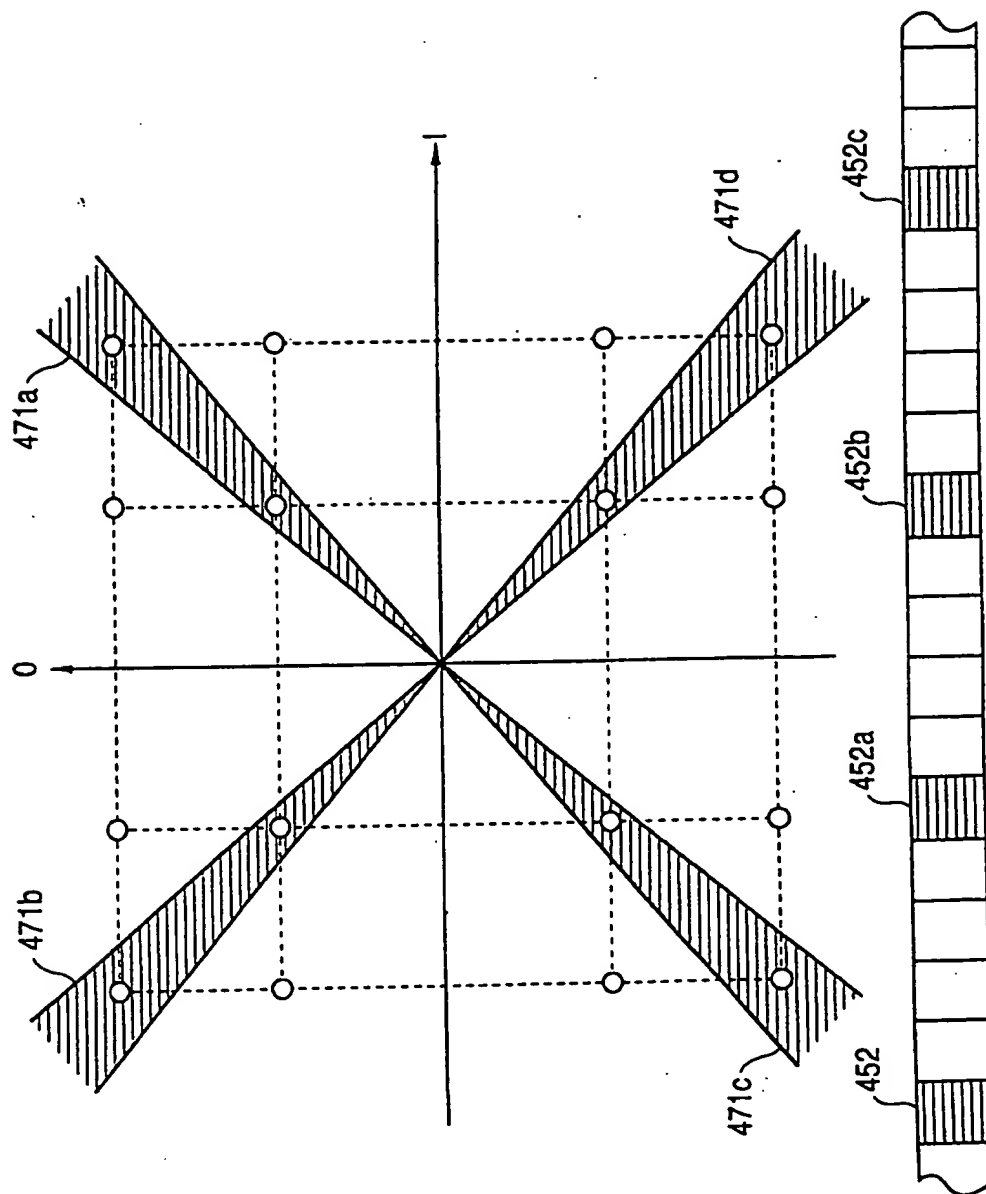


FIG. 40

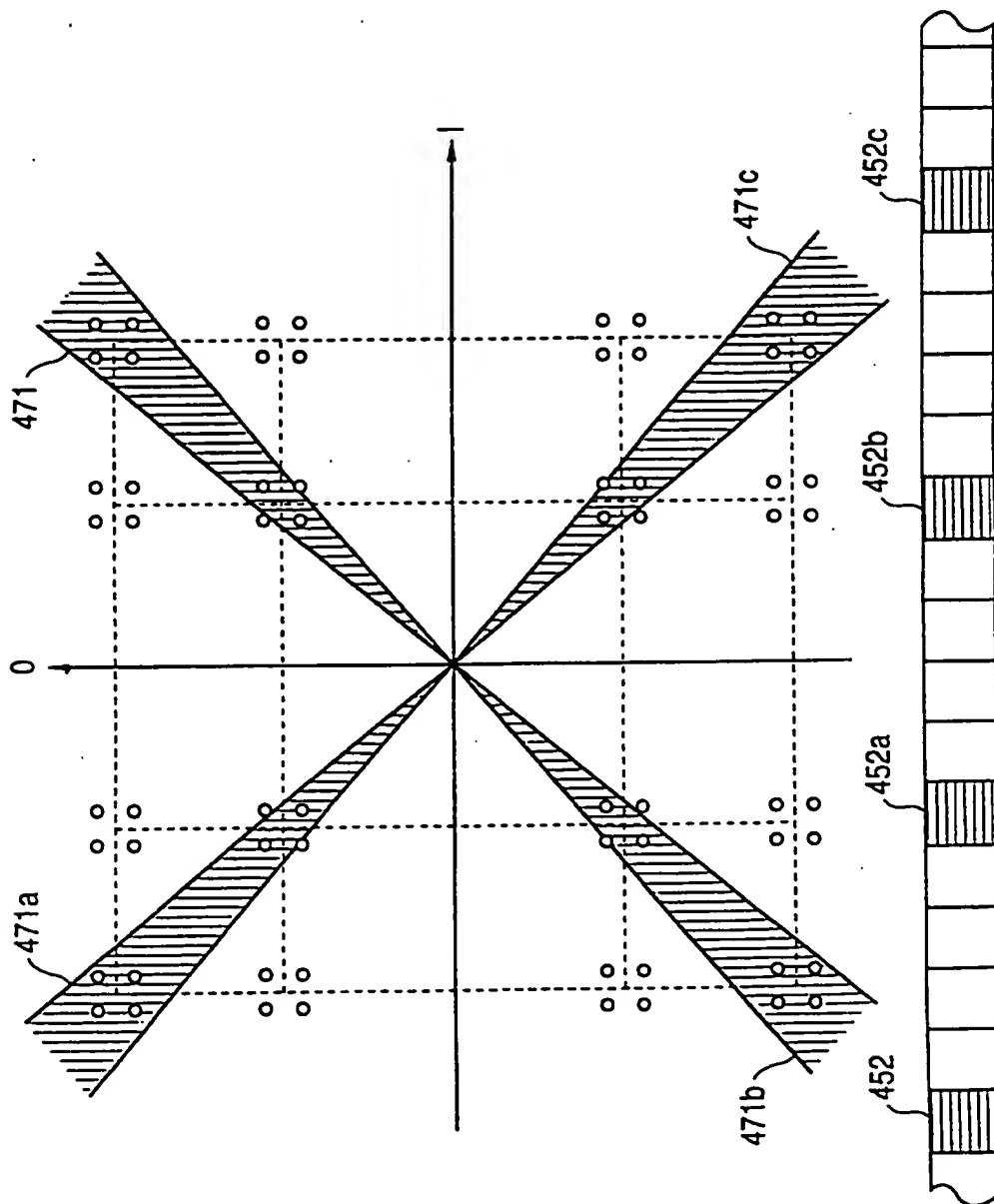


FIG. 41

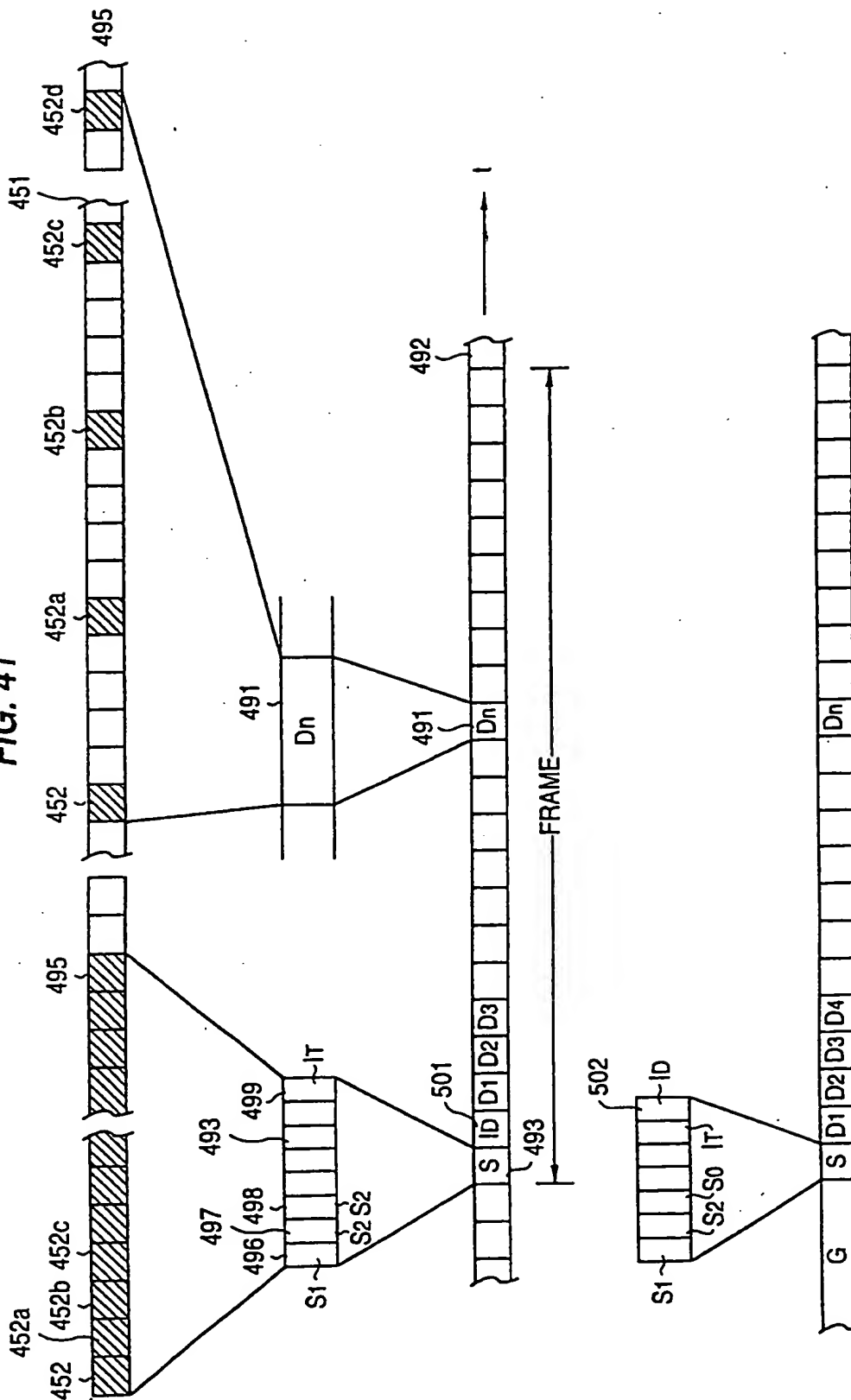


FIG. 42

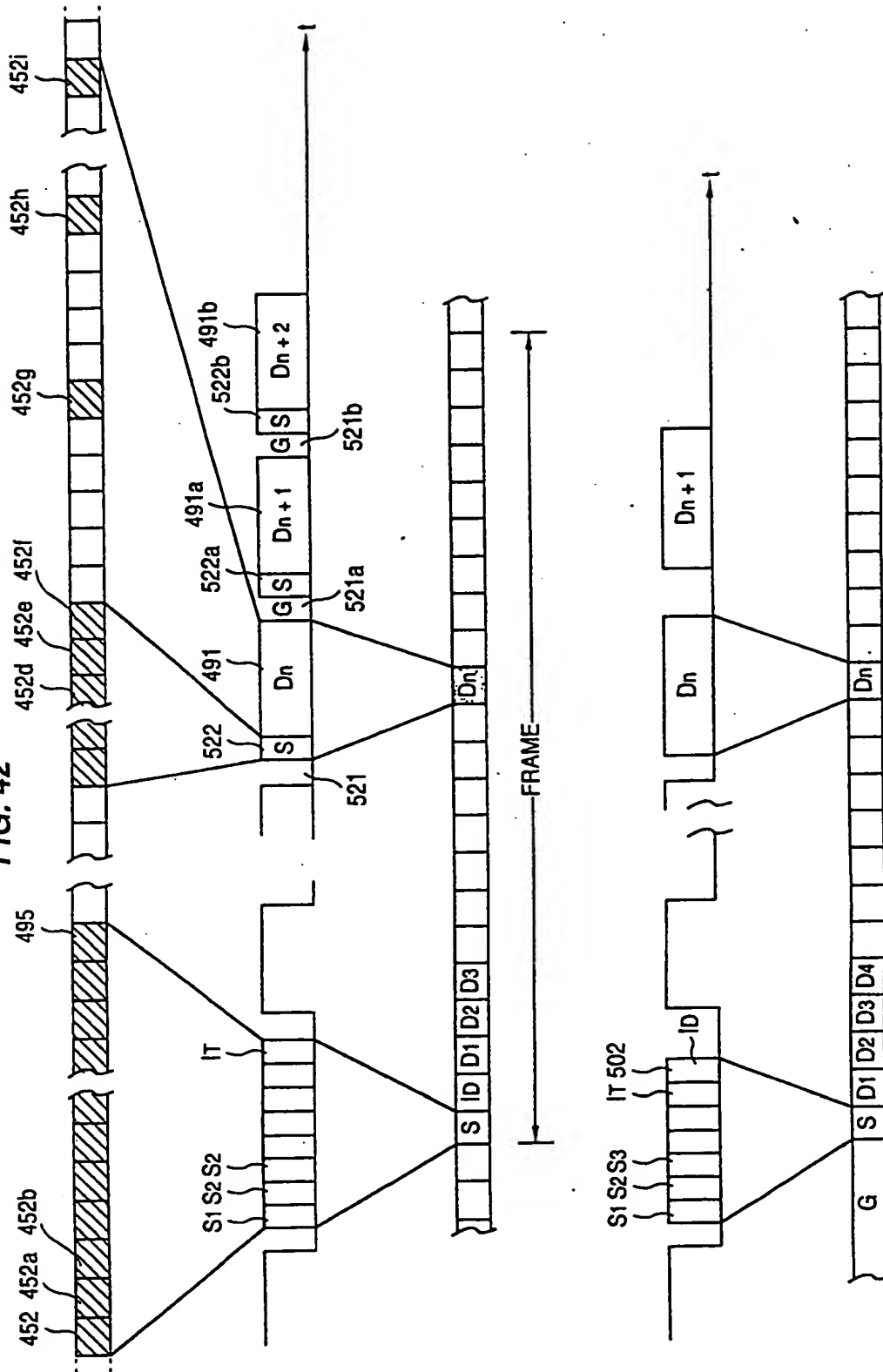


FIG. 43

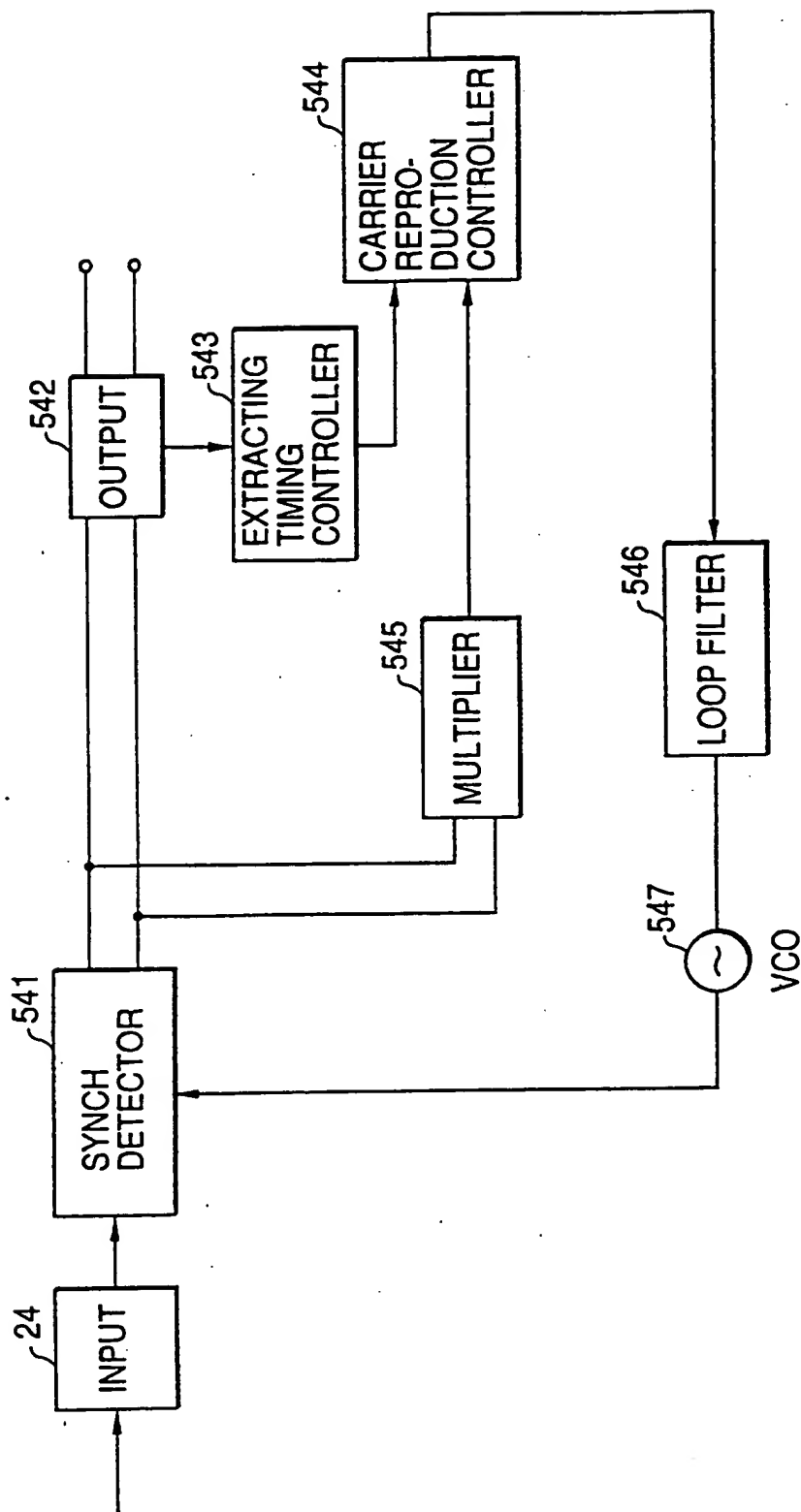


FIG. 44

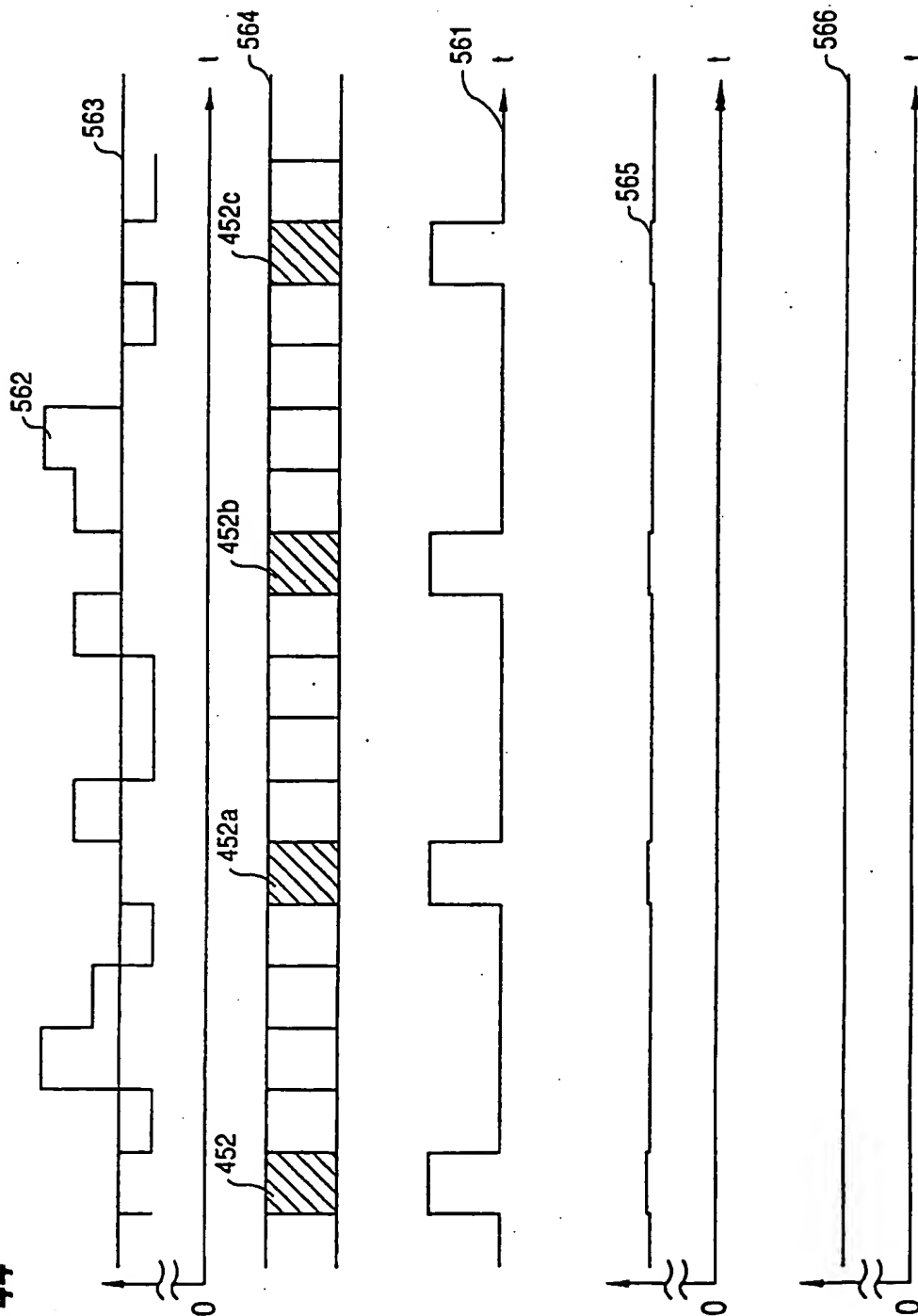


FIG. 45

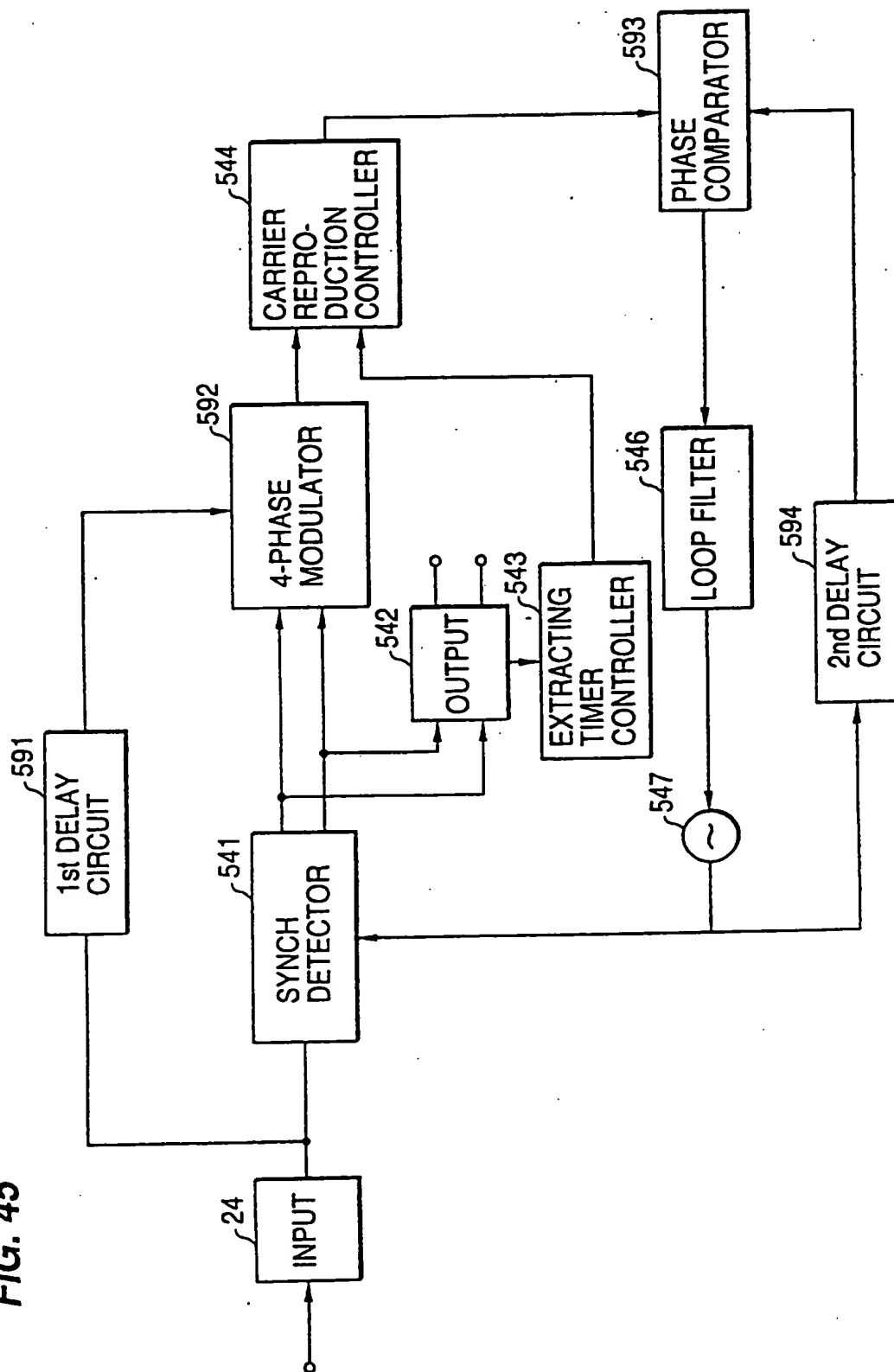


FIG. 46

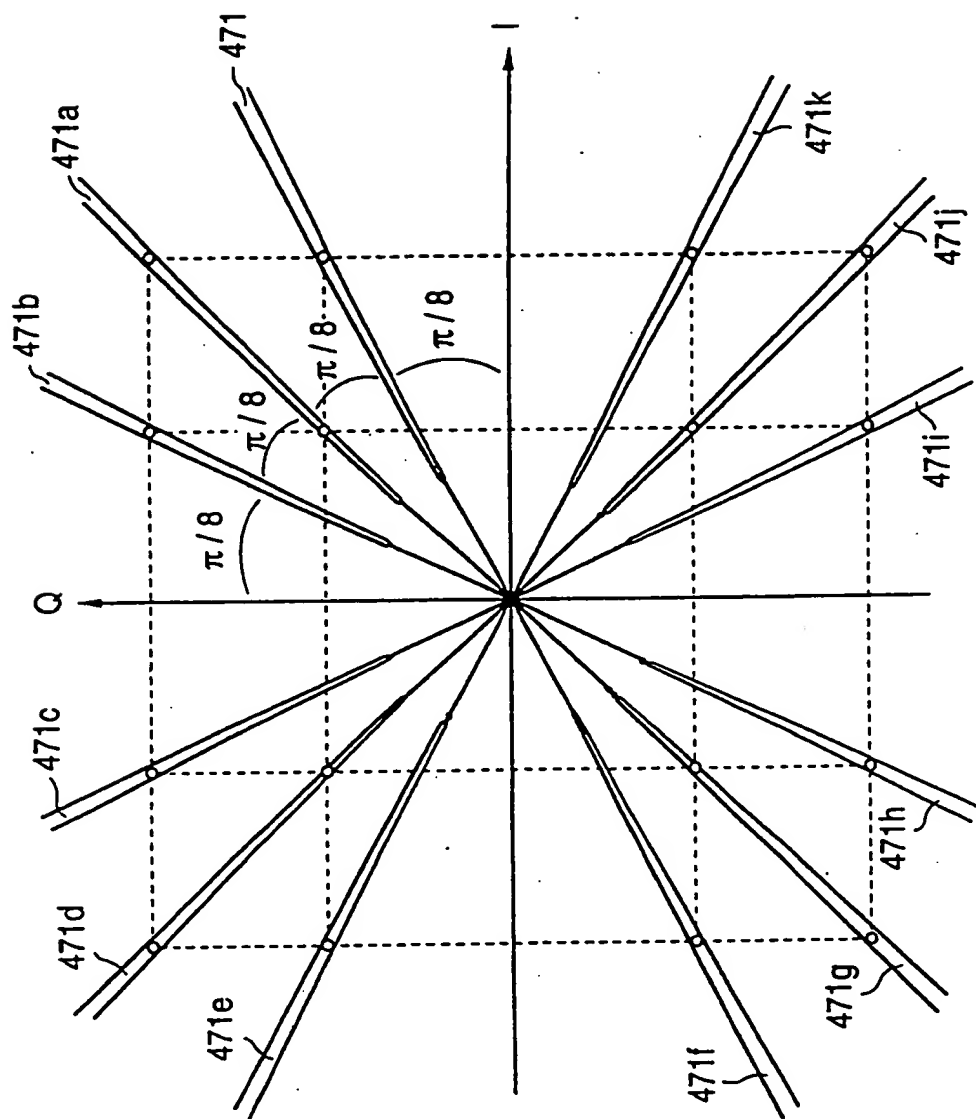


FIG. 47

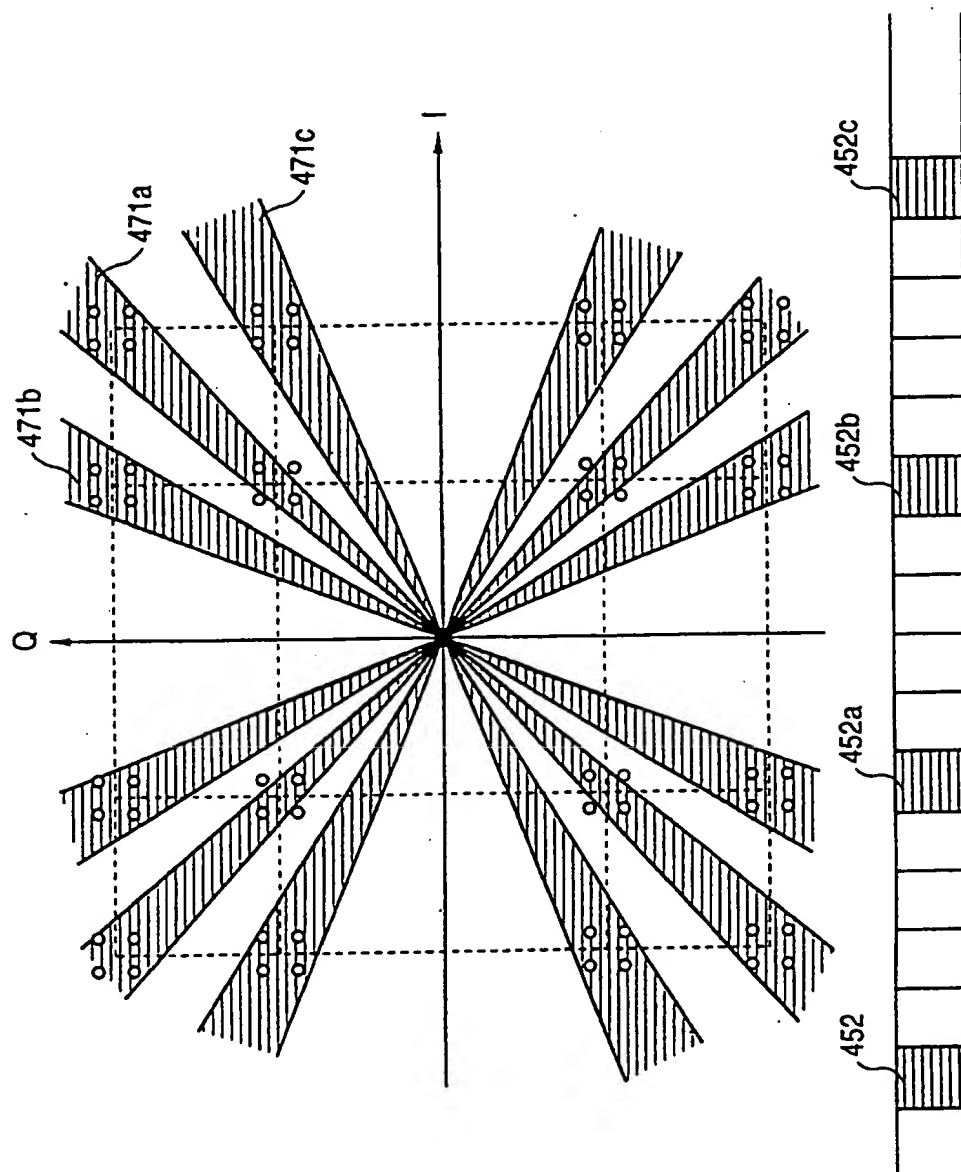


FIG. 48 (Amended)

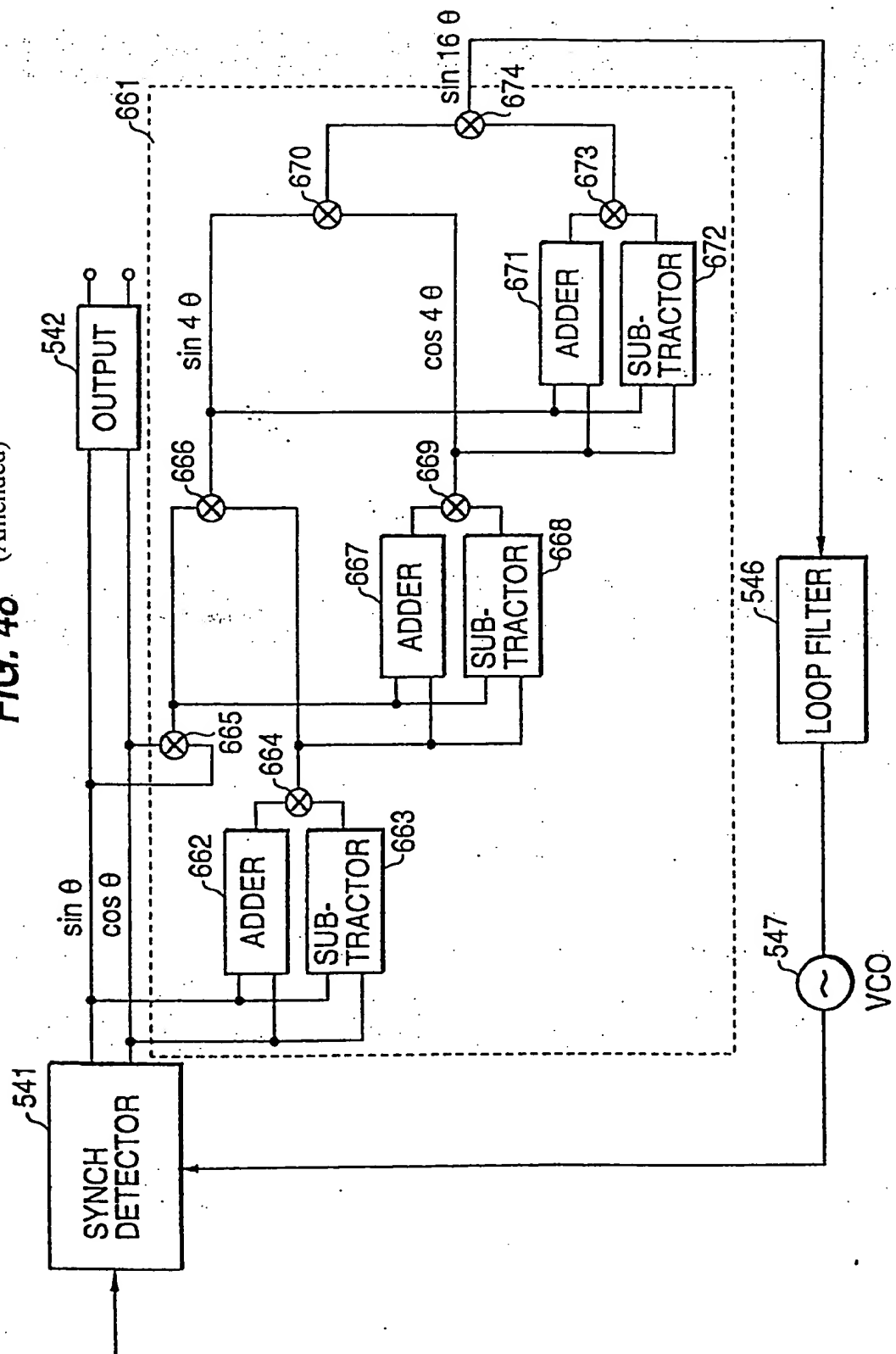


FIG. 49

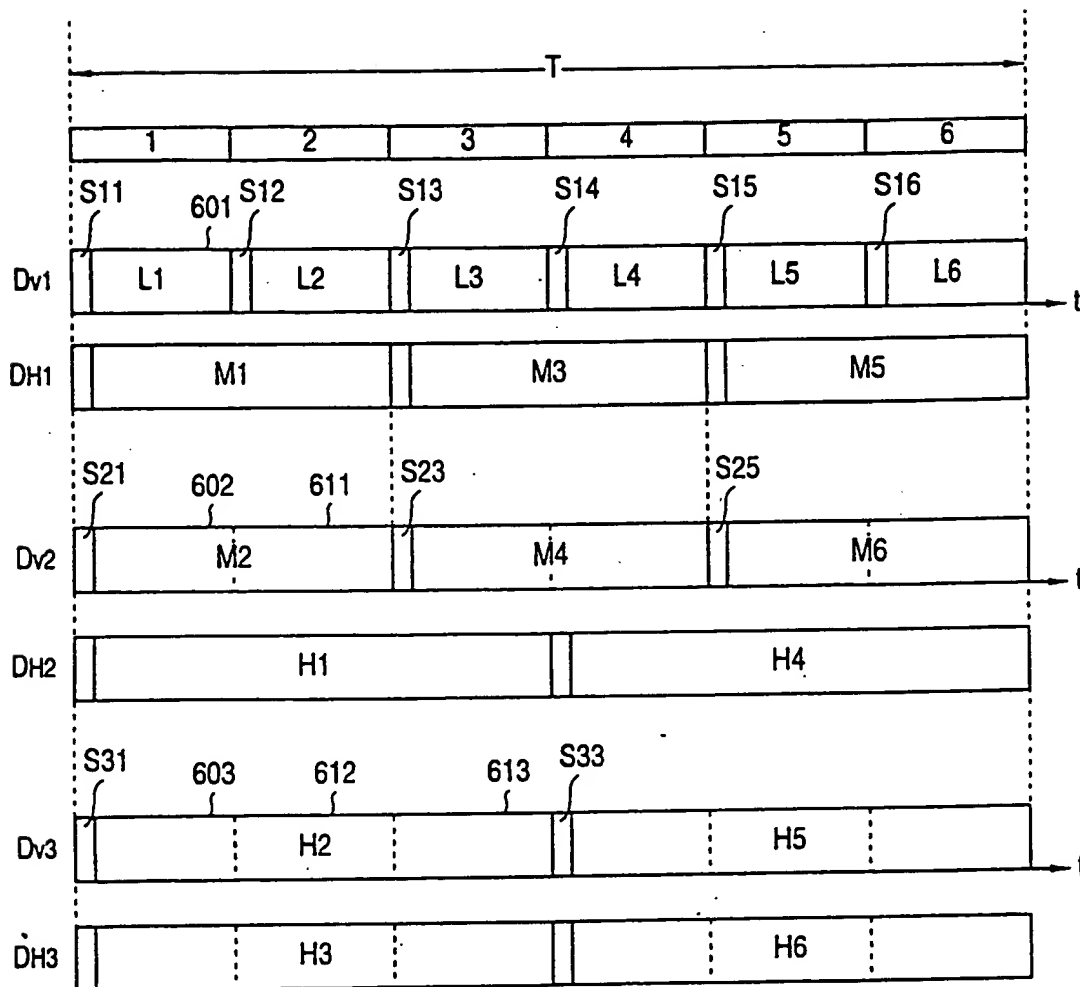


FIG. 50

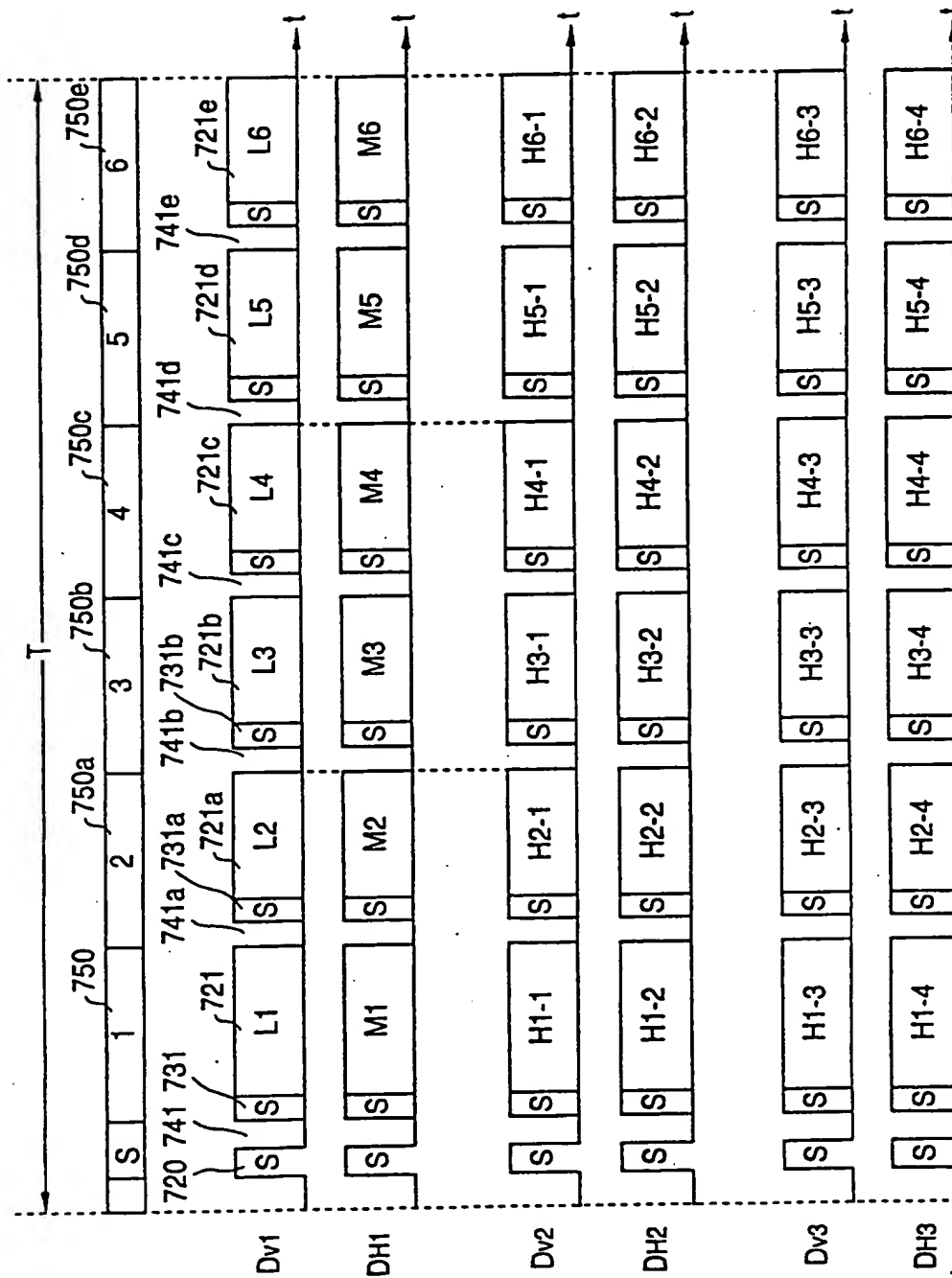


FIG. 51

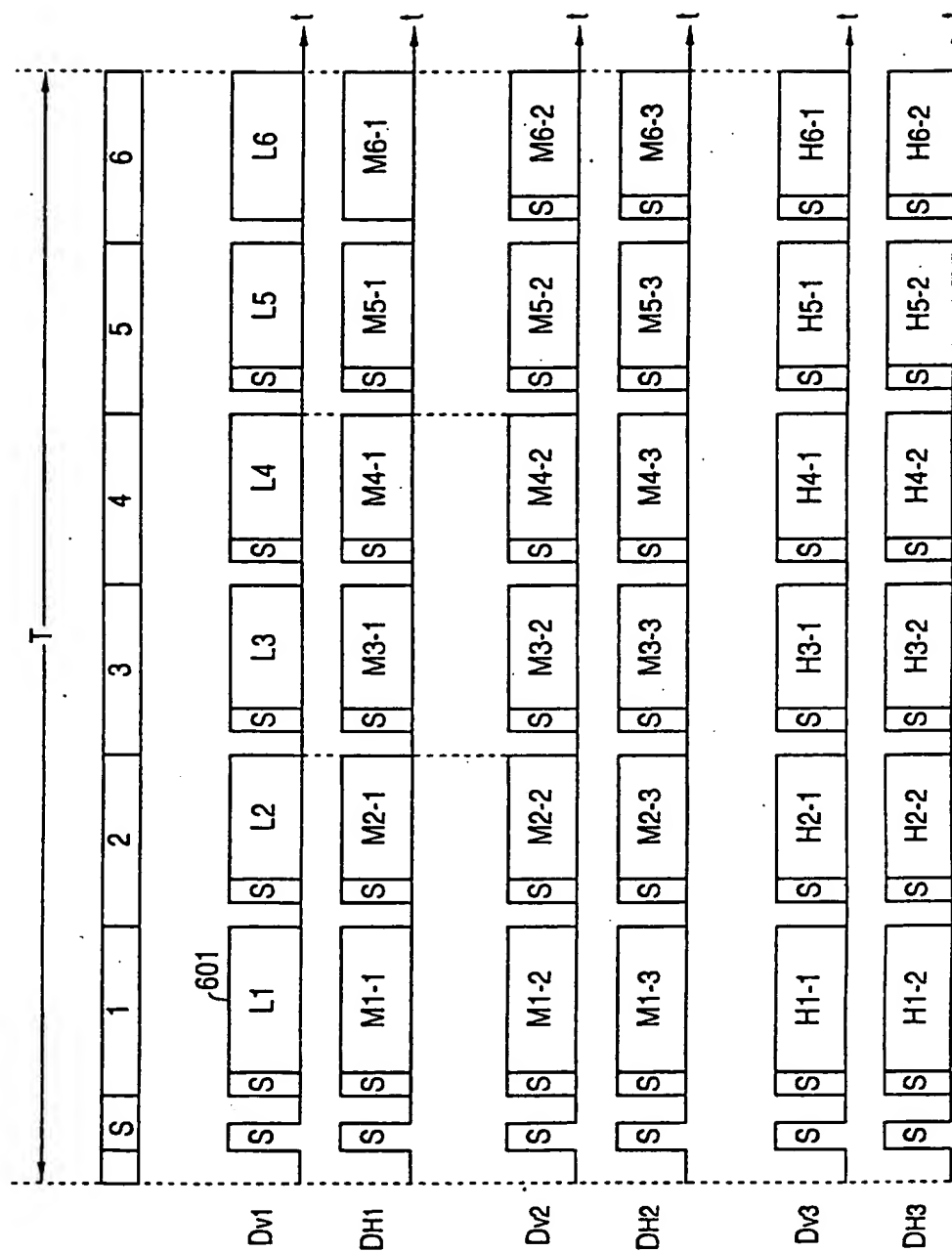


FIG. 52

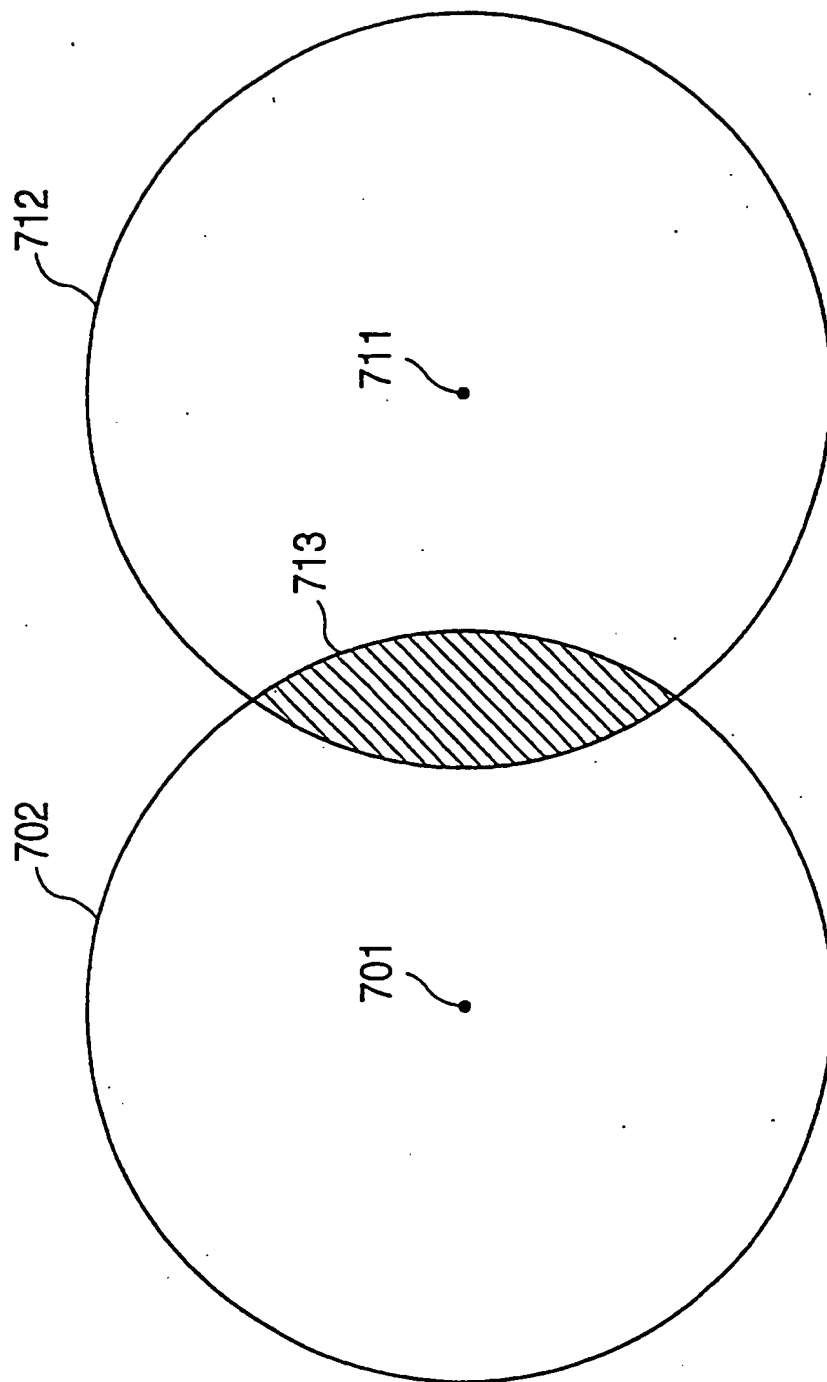


FIG. 53

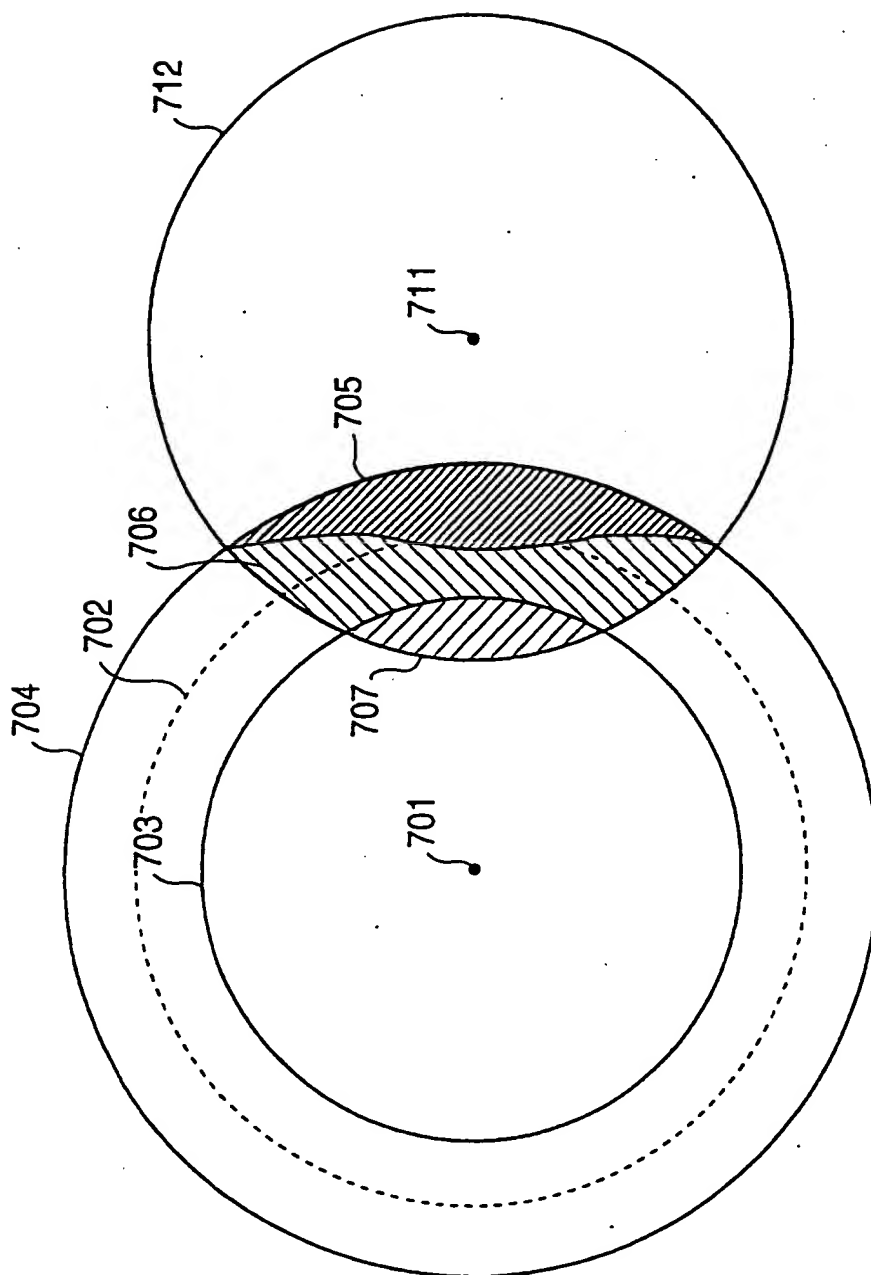


FIG. 54

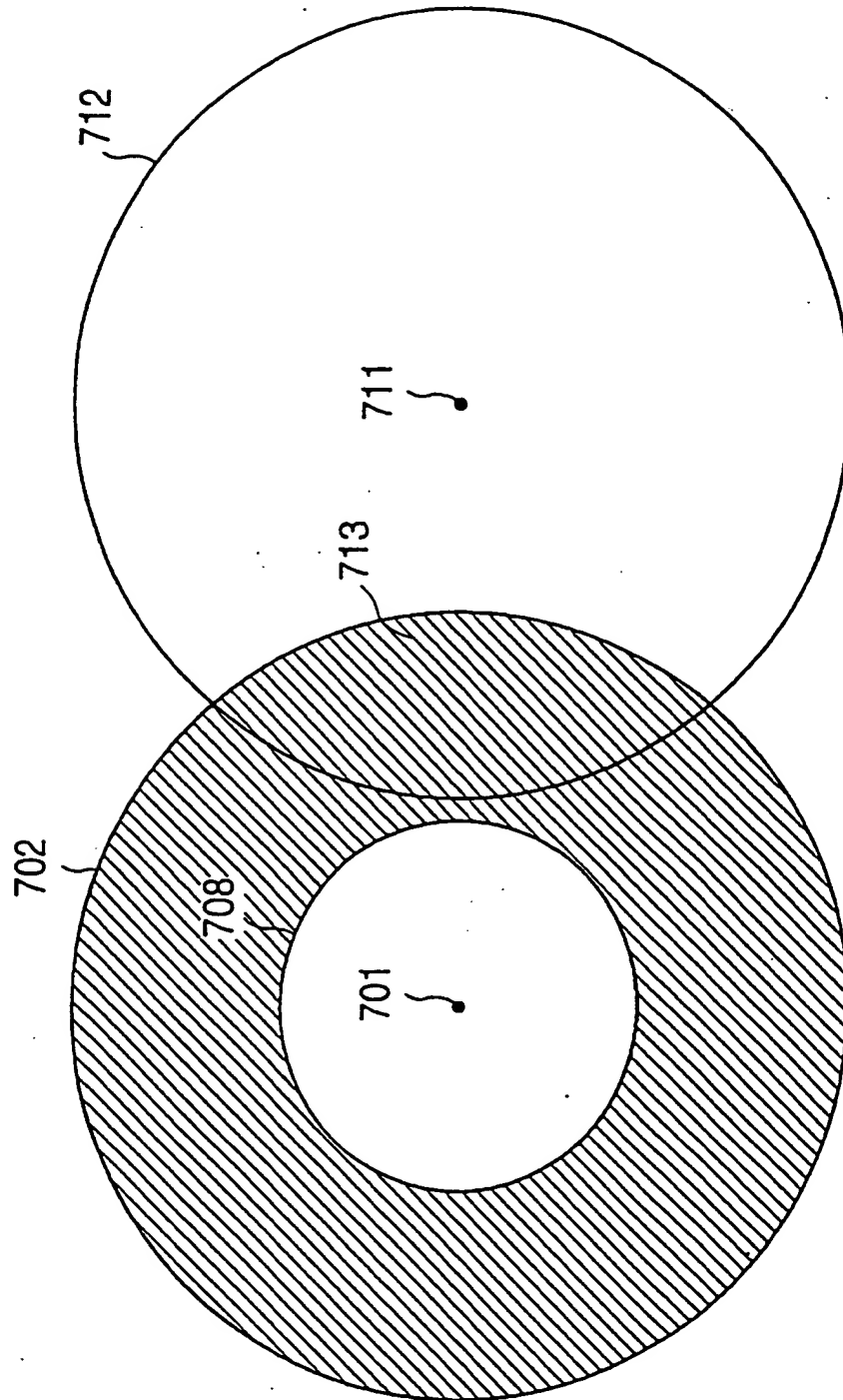


FIG. 55

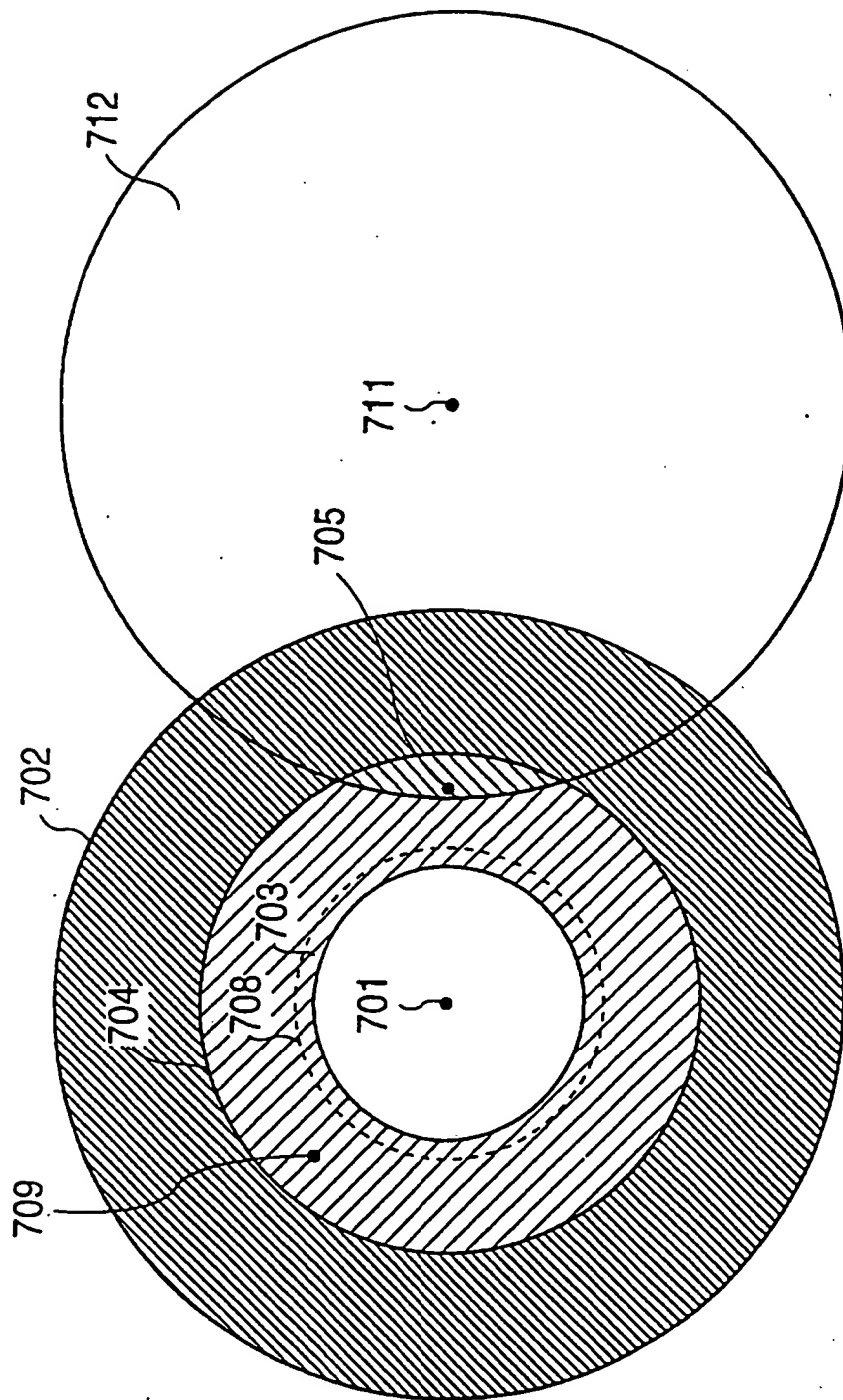


FIG. 56

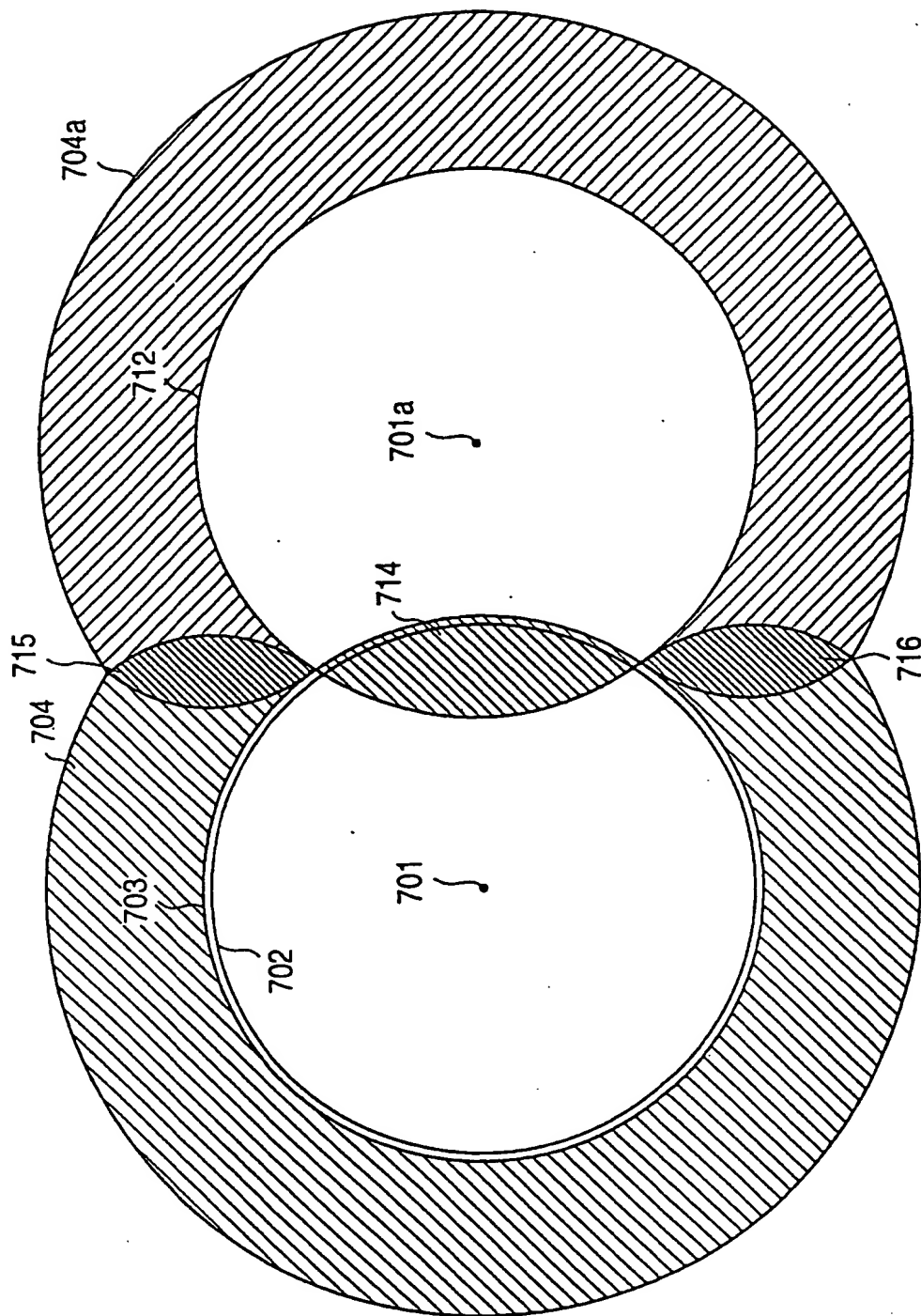


FIG. 57

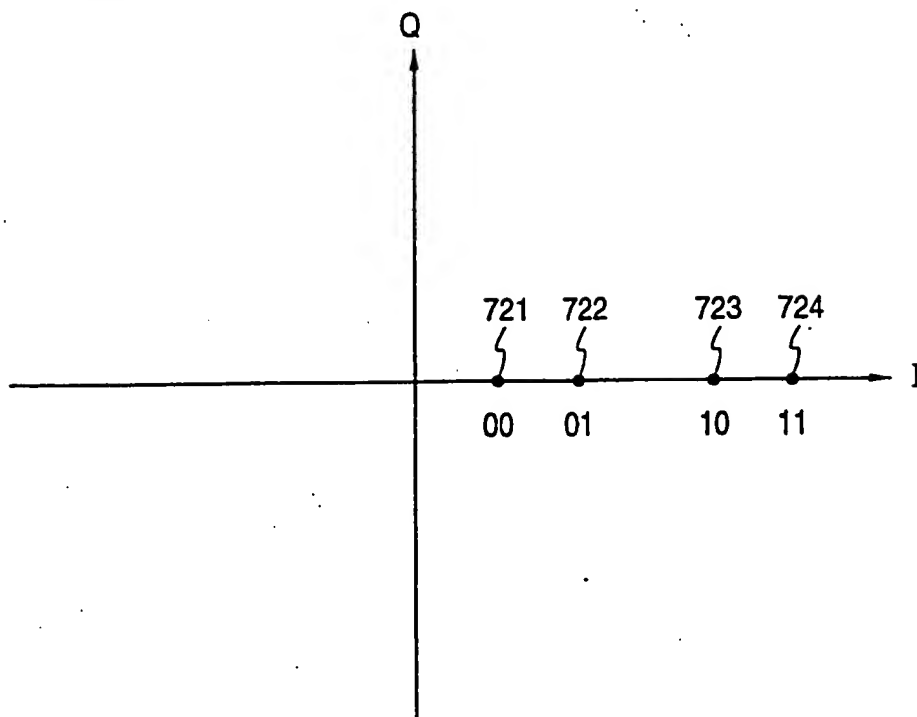


FIG. 58

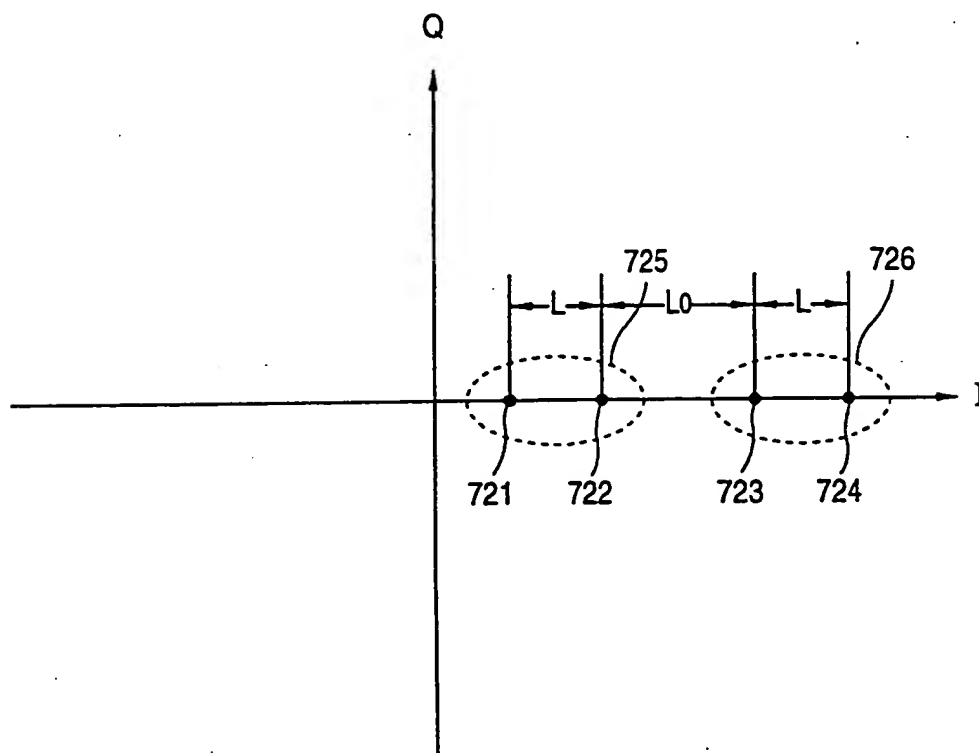


FIG. 59(a)

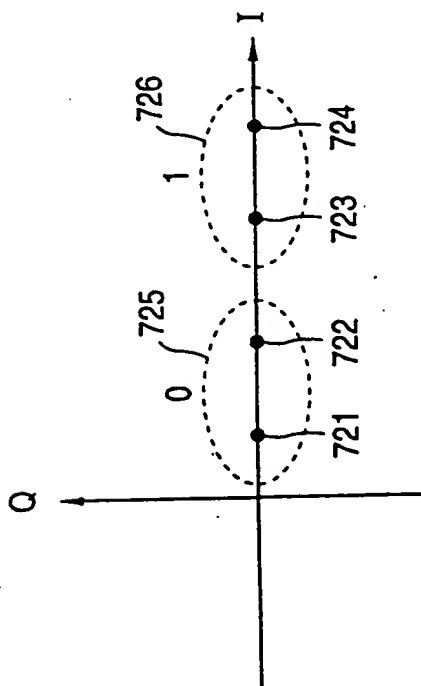


FIG. 59(c)

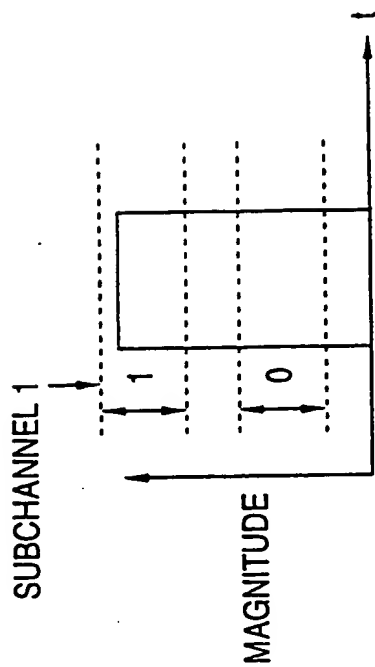


FIG. 59(b)

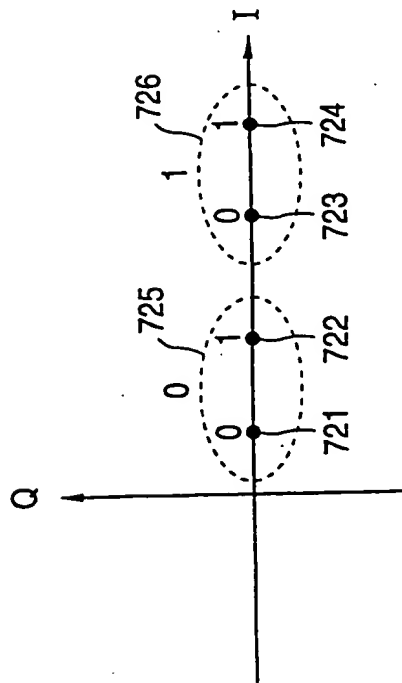


FIG. 59(d)

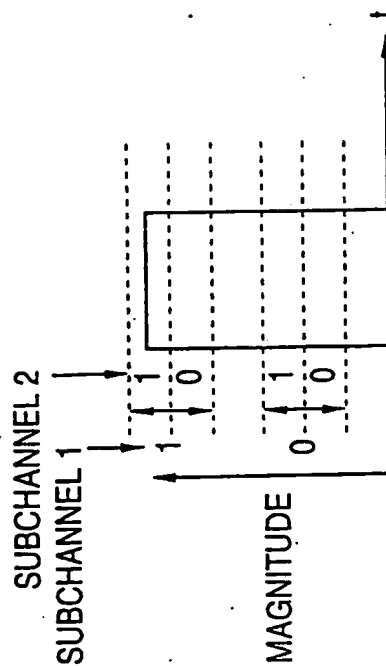


FIG. 60

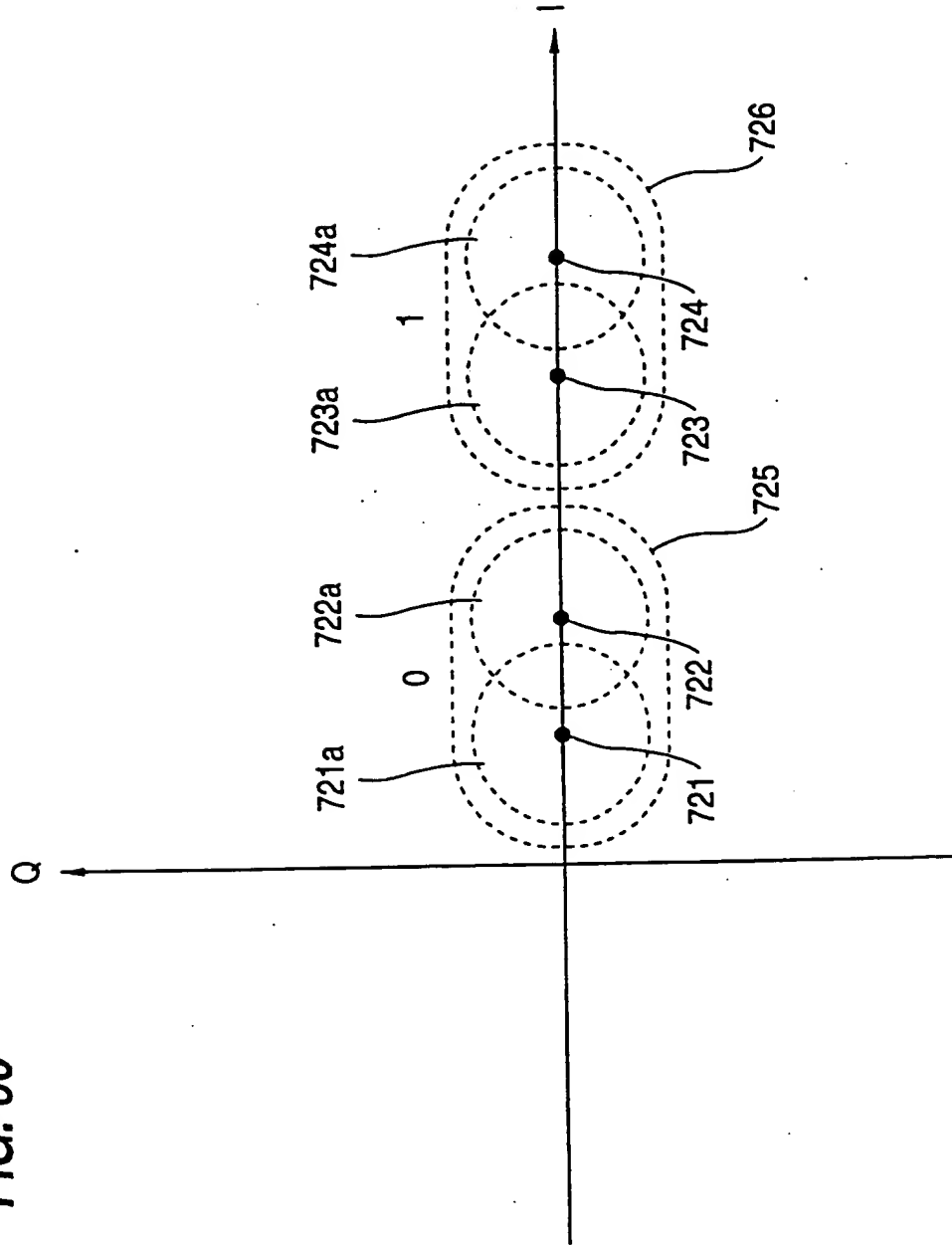


FIG. 61

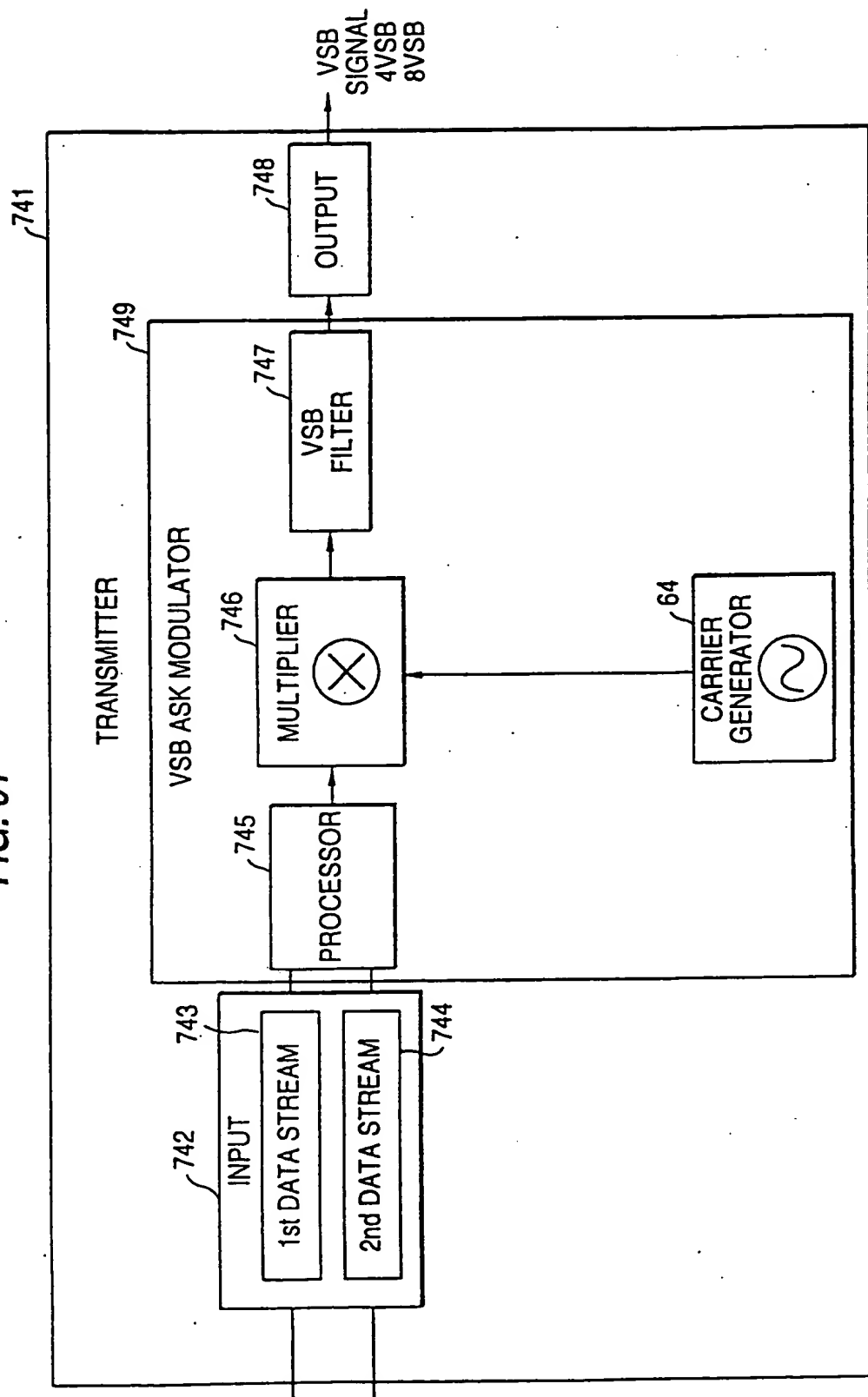


FIG. 62(a)

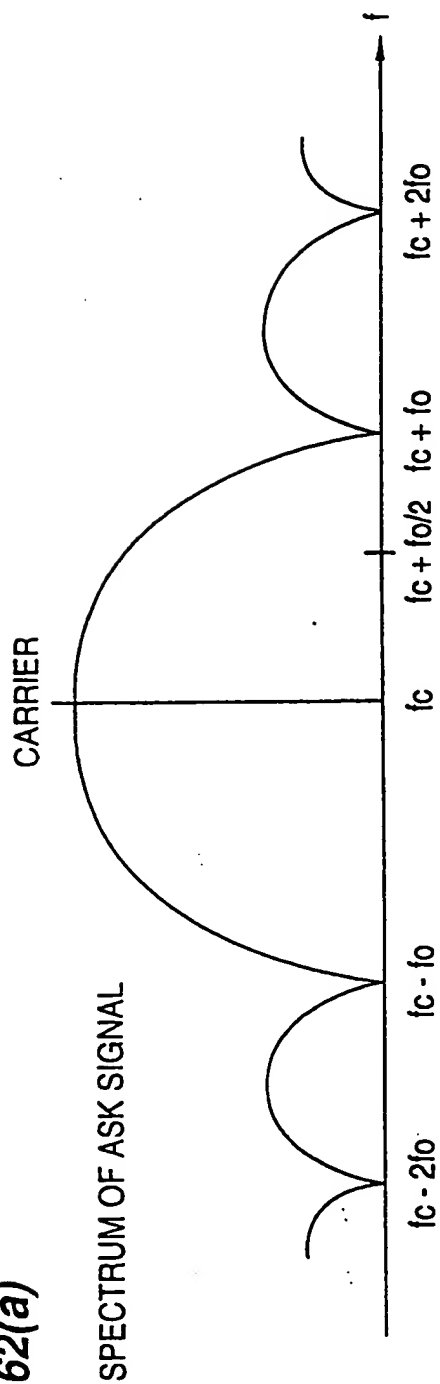


FIG. 62(b)

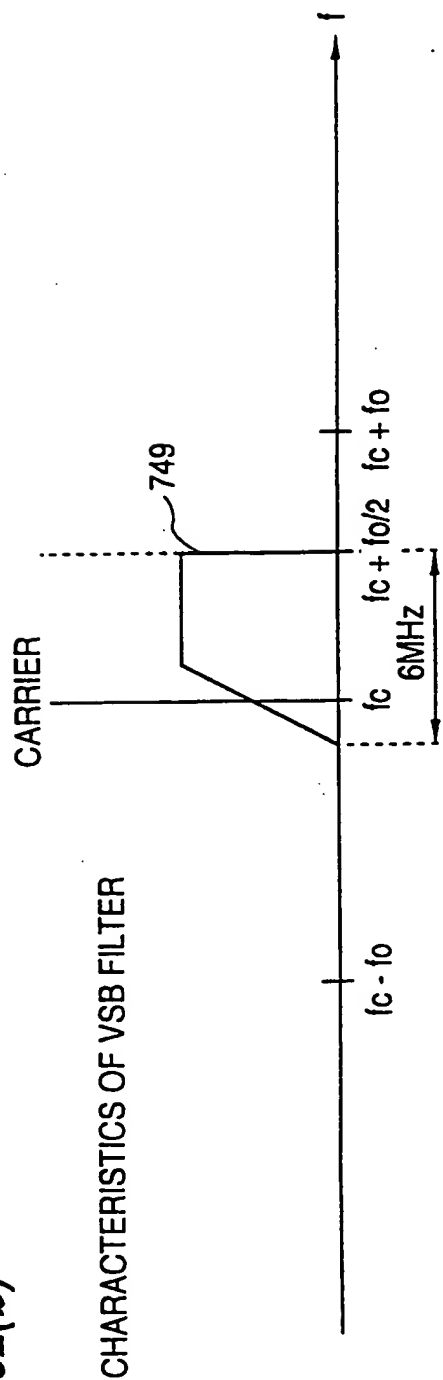


FIG. 63

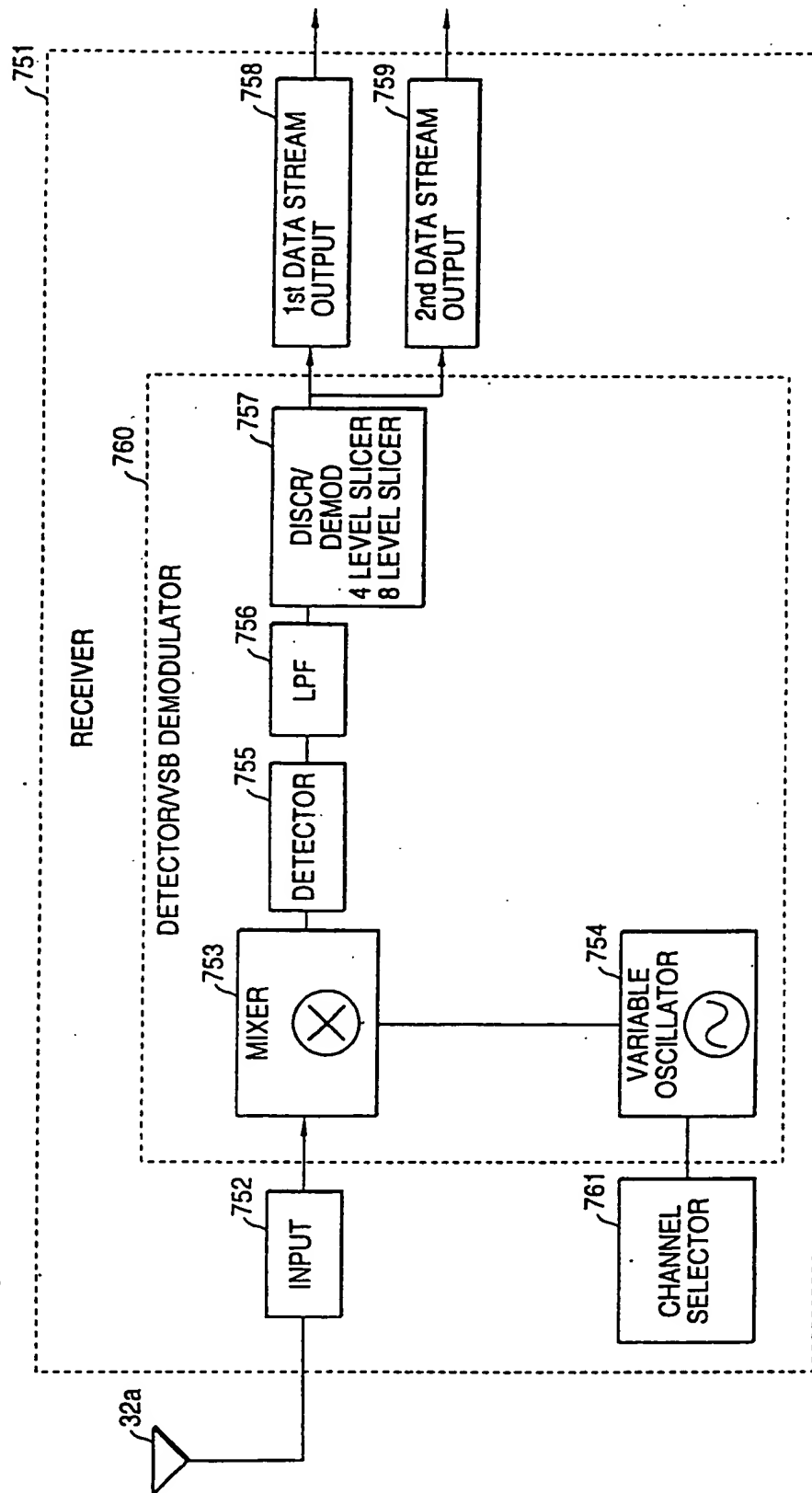


FIG. 64

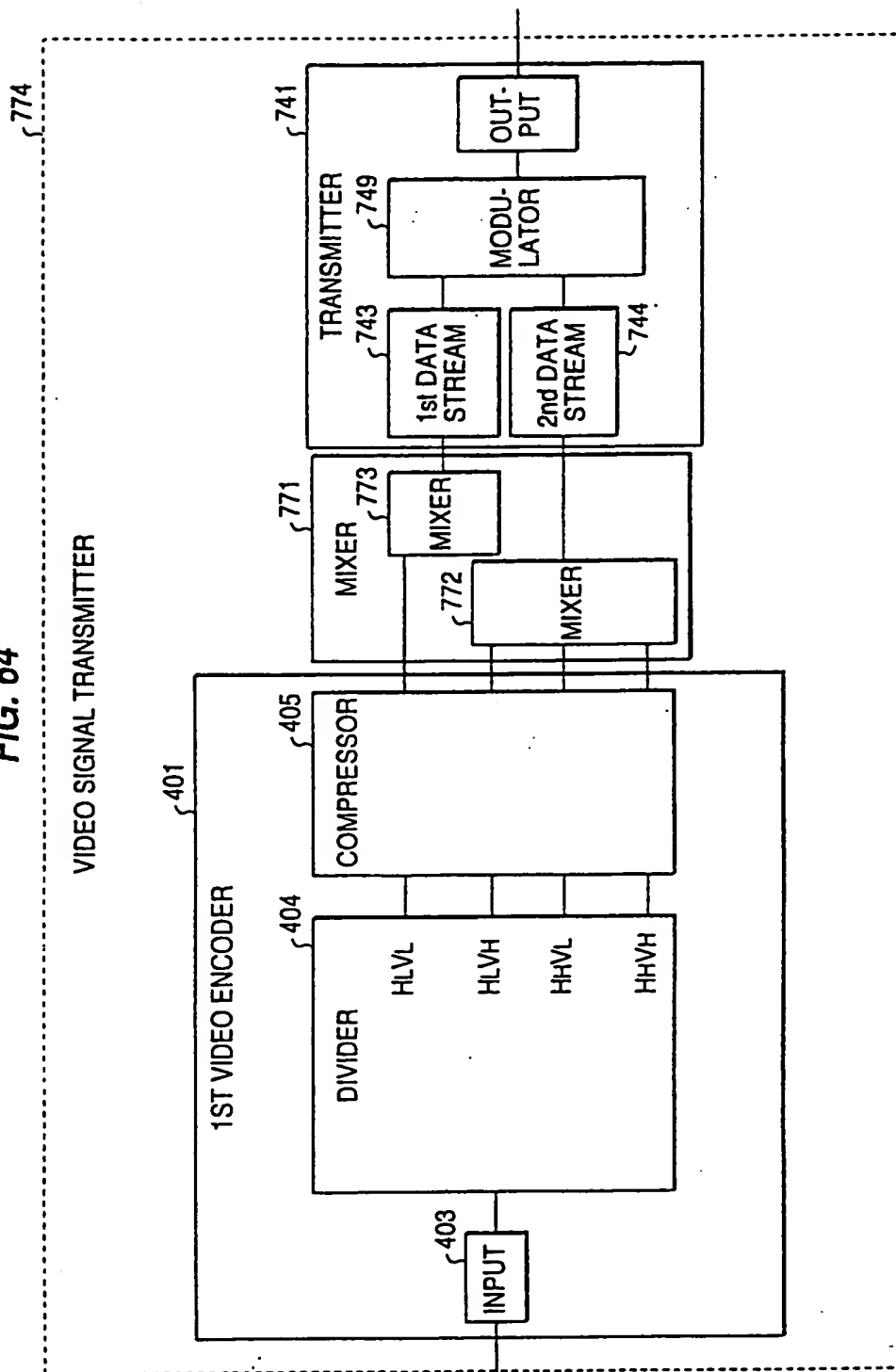


FIG. 65 (Amended)

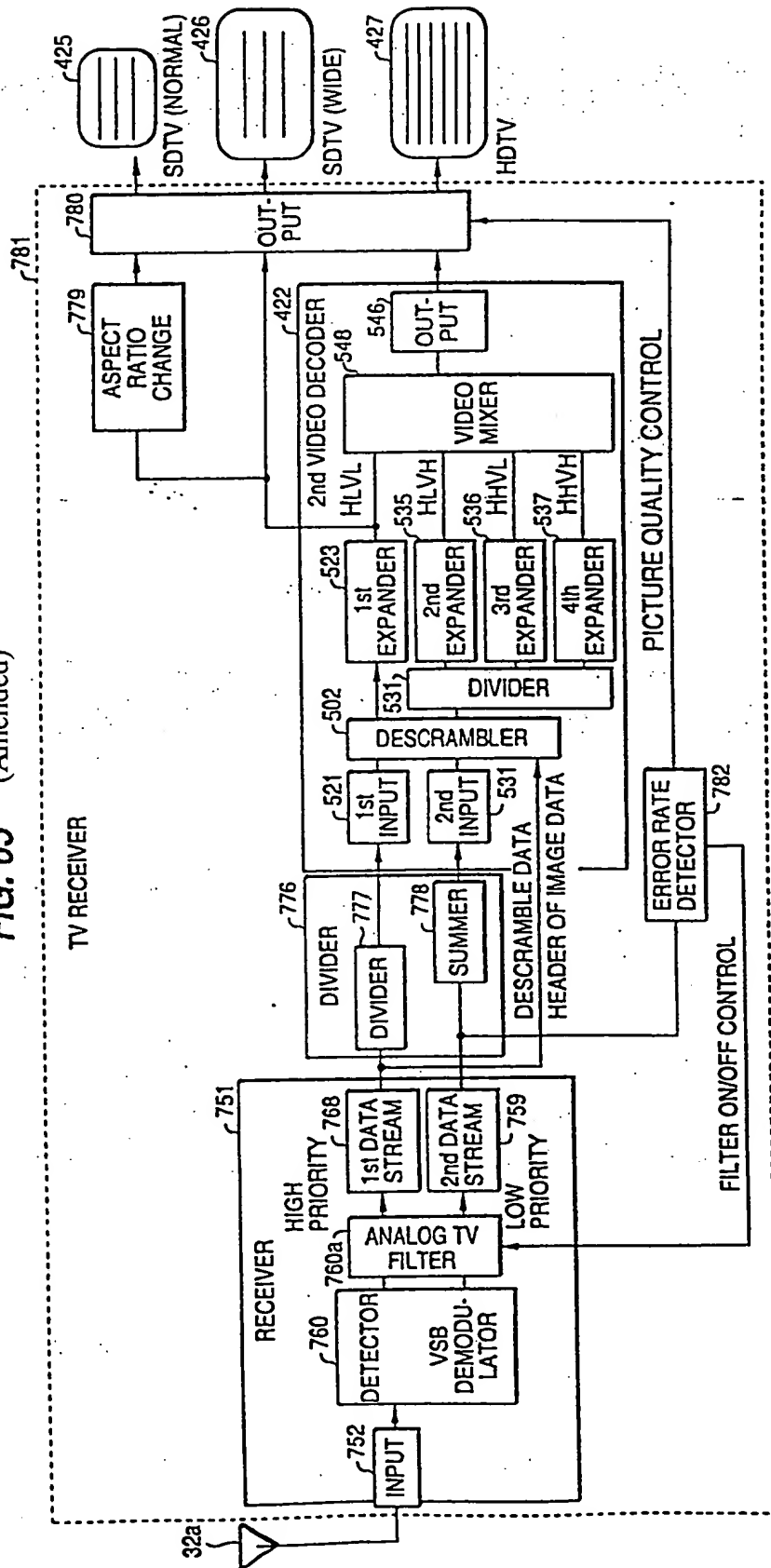
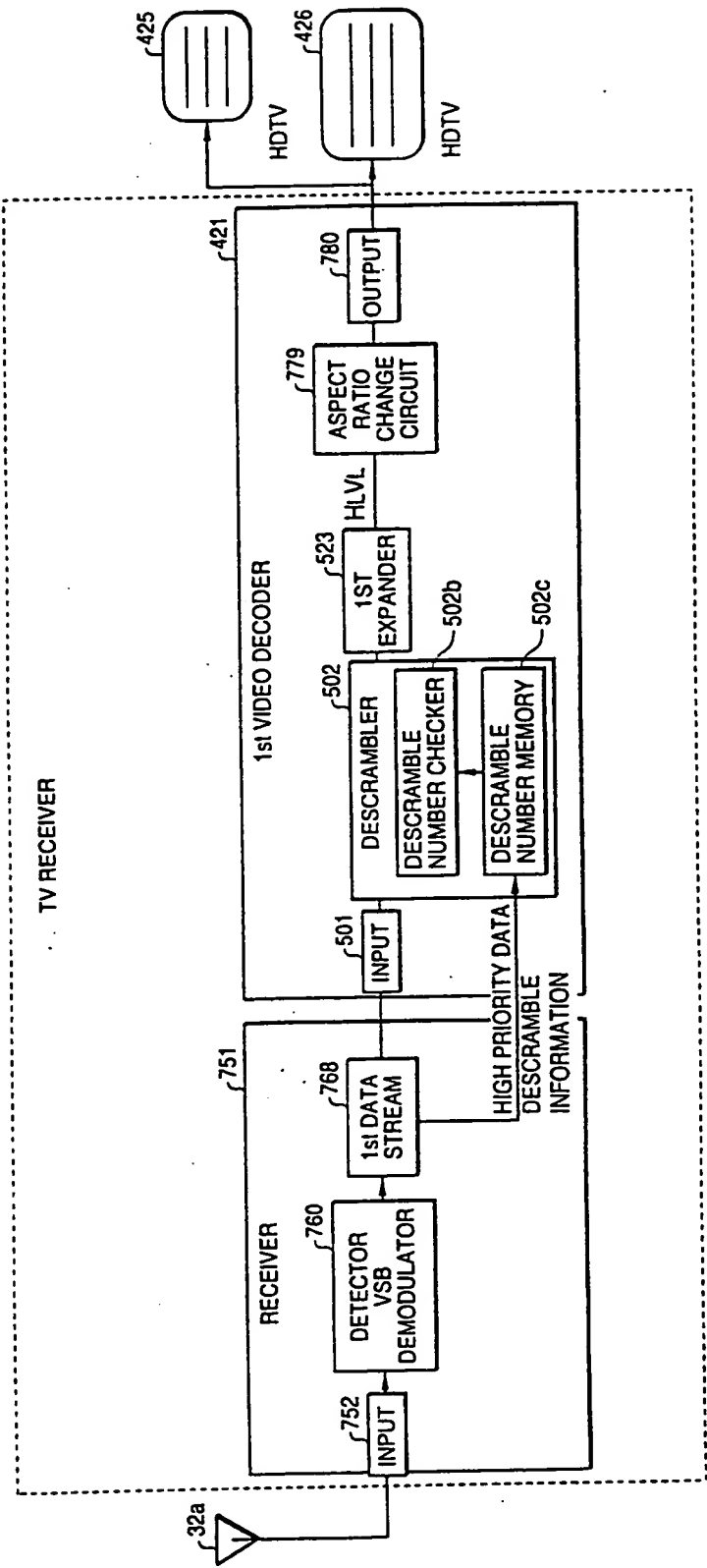


FIG. 66



32

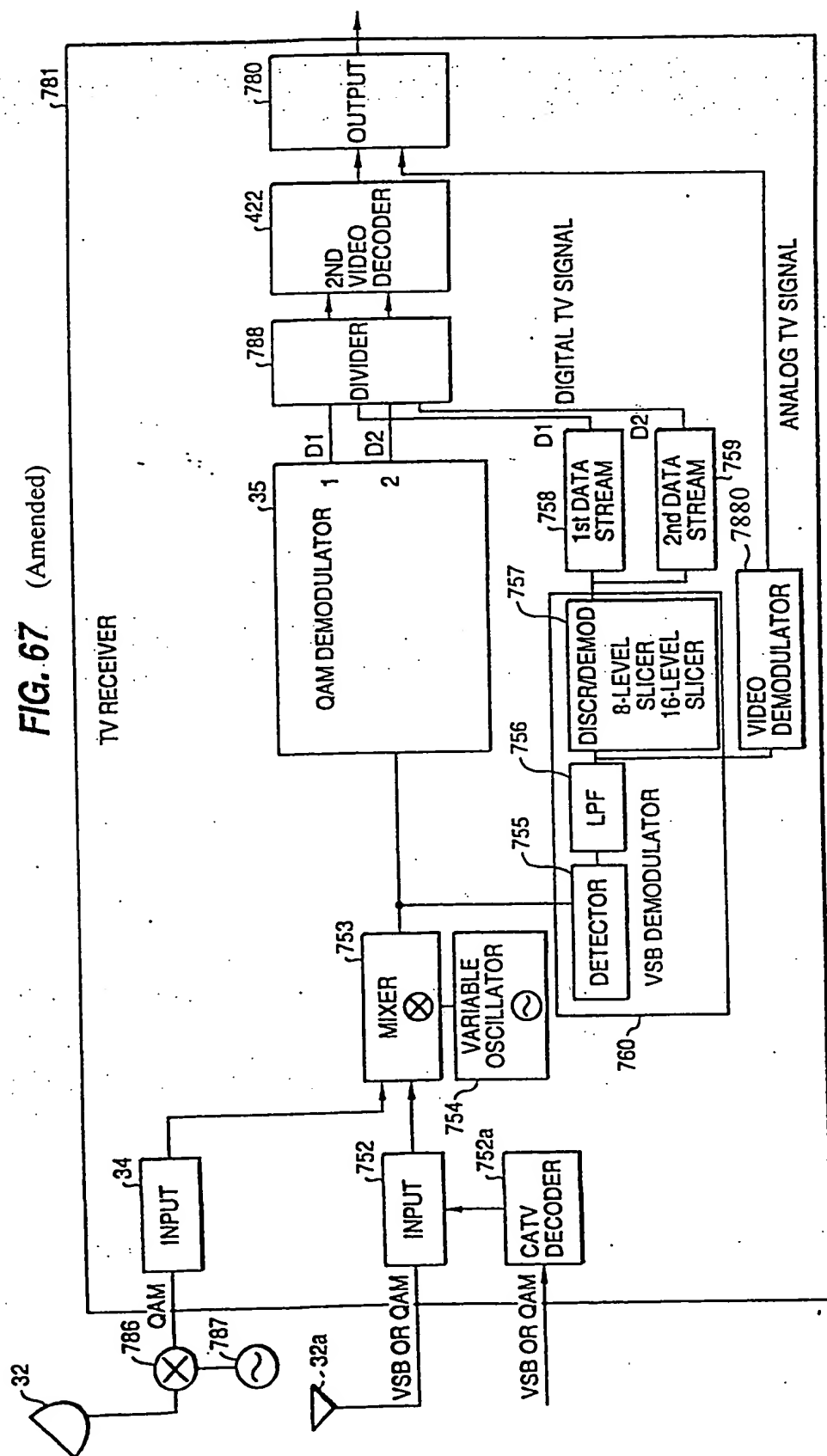


FIG. 68(a)

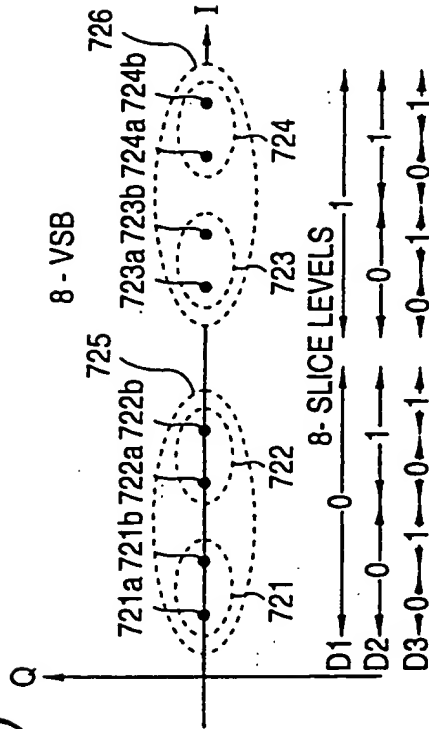


FIG. 68(b)

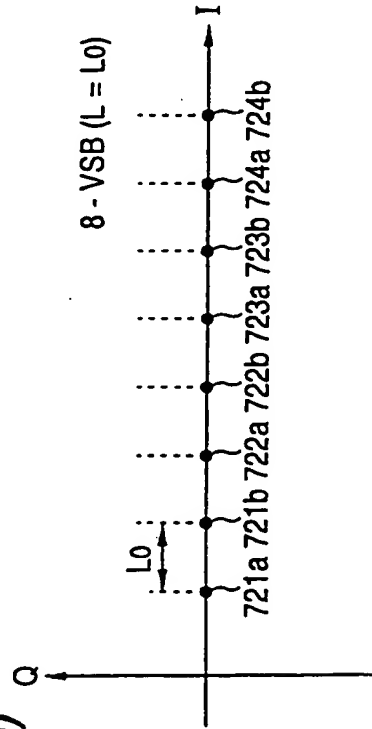


FIG. 68(c)

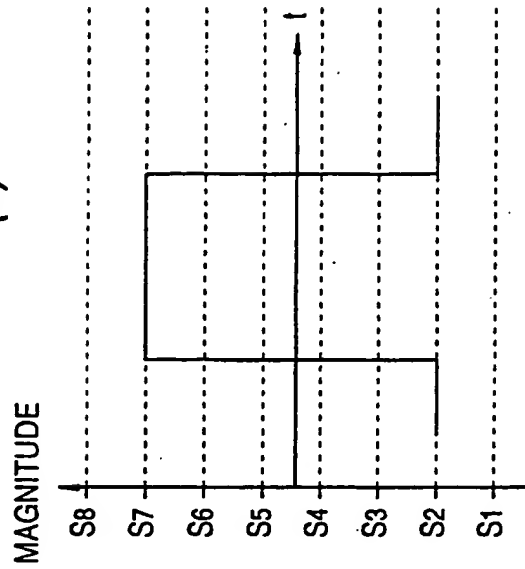


FIG. 69

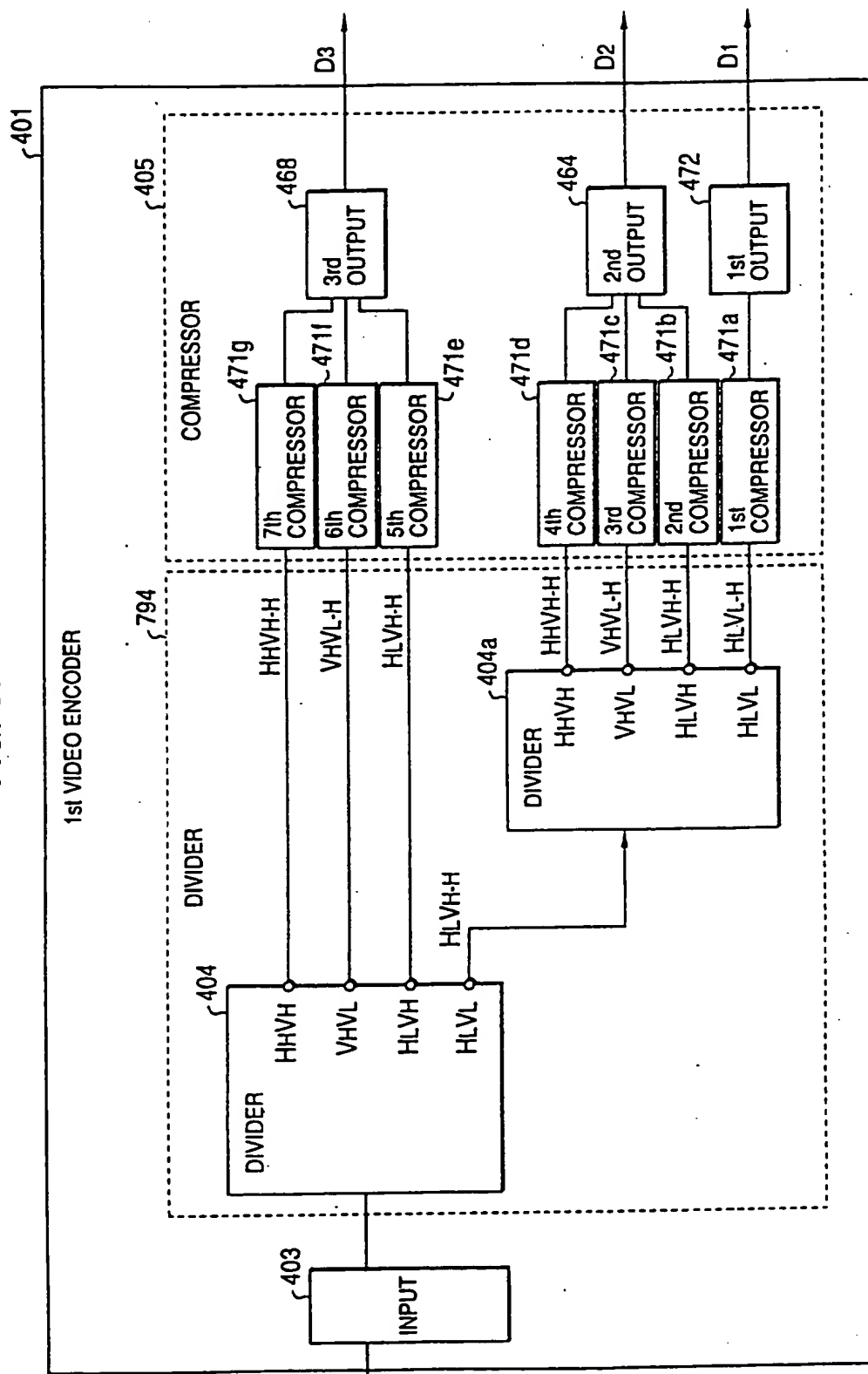


FIG. 70

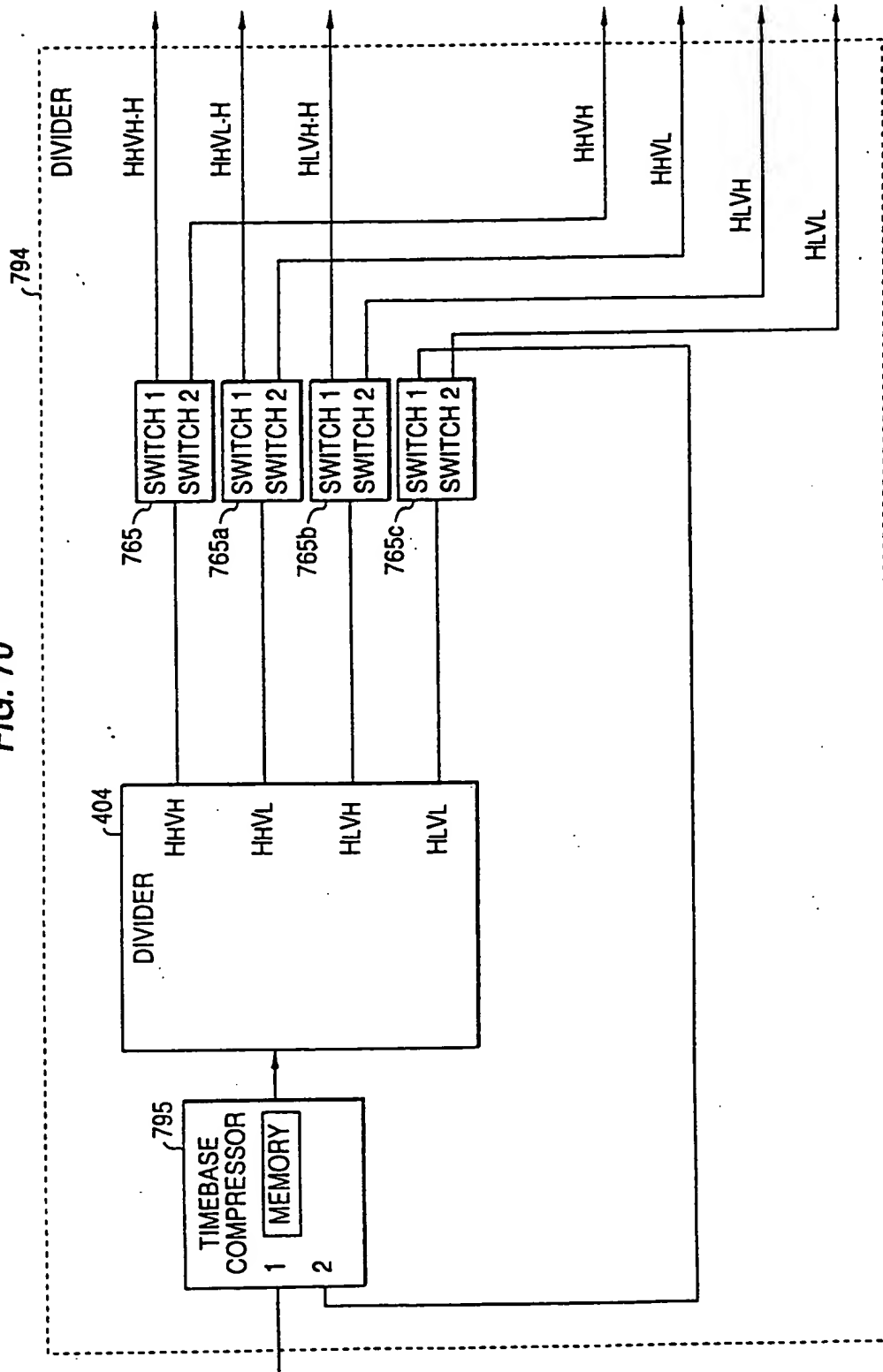


FIG. 71

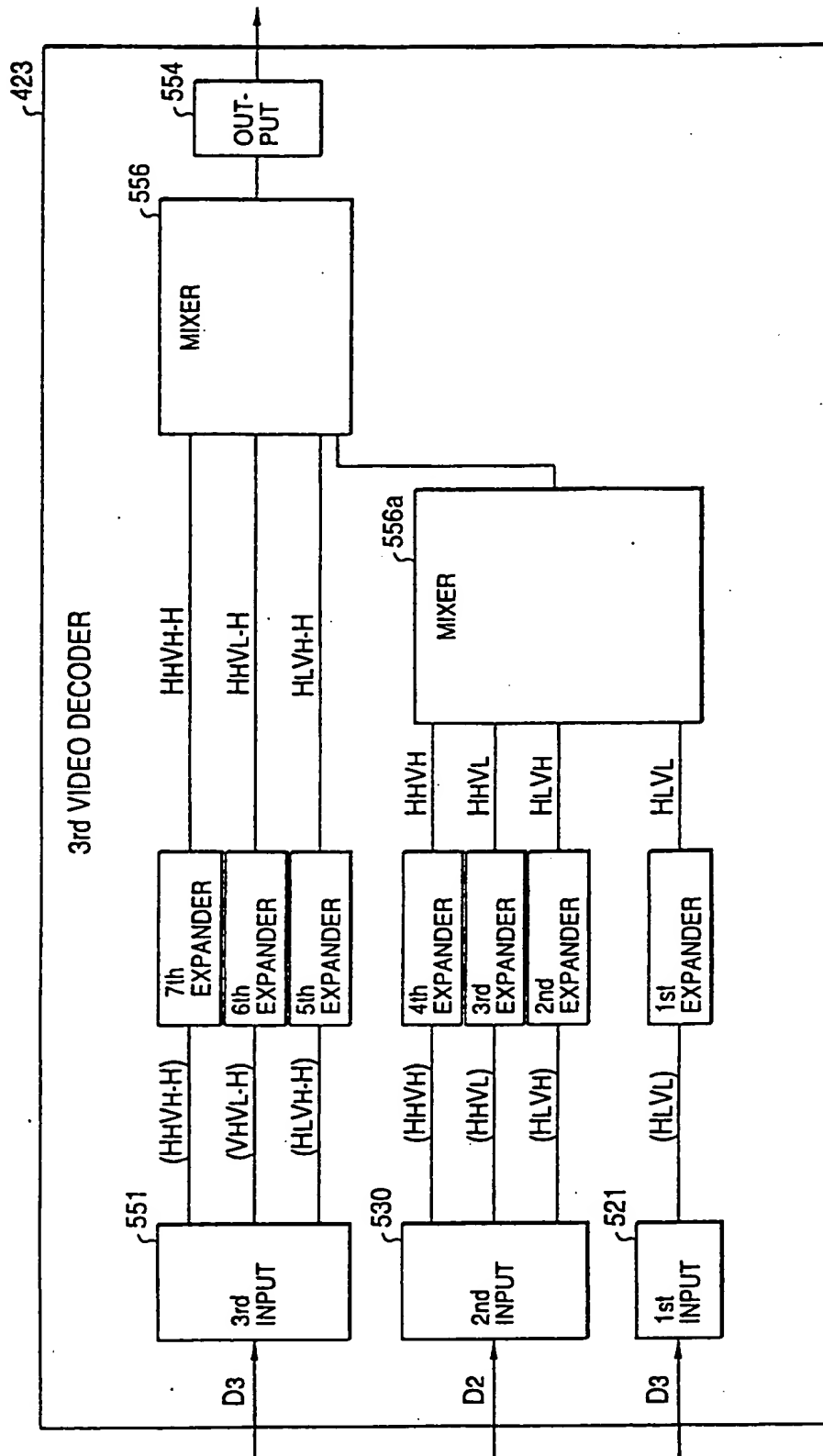


FIG. 72

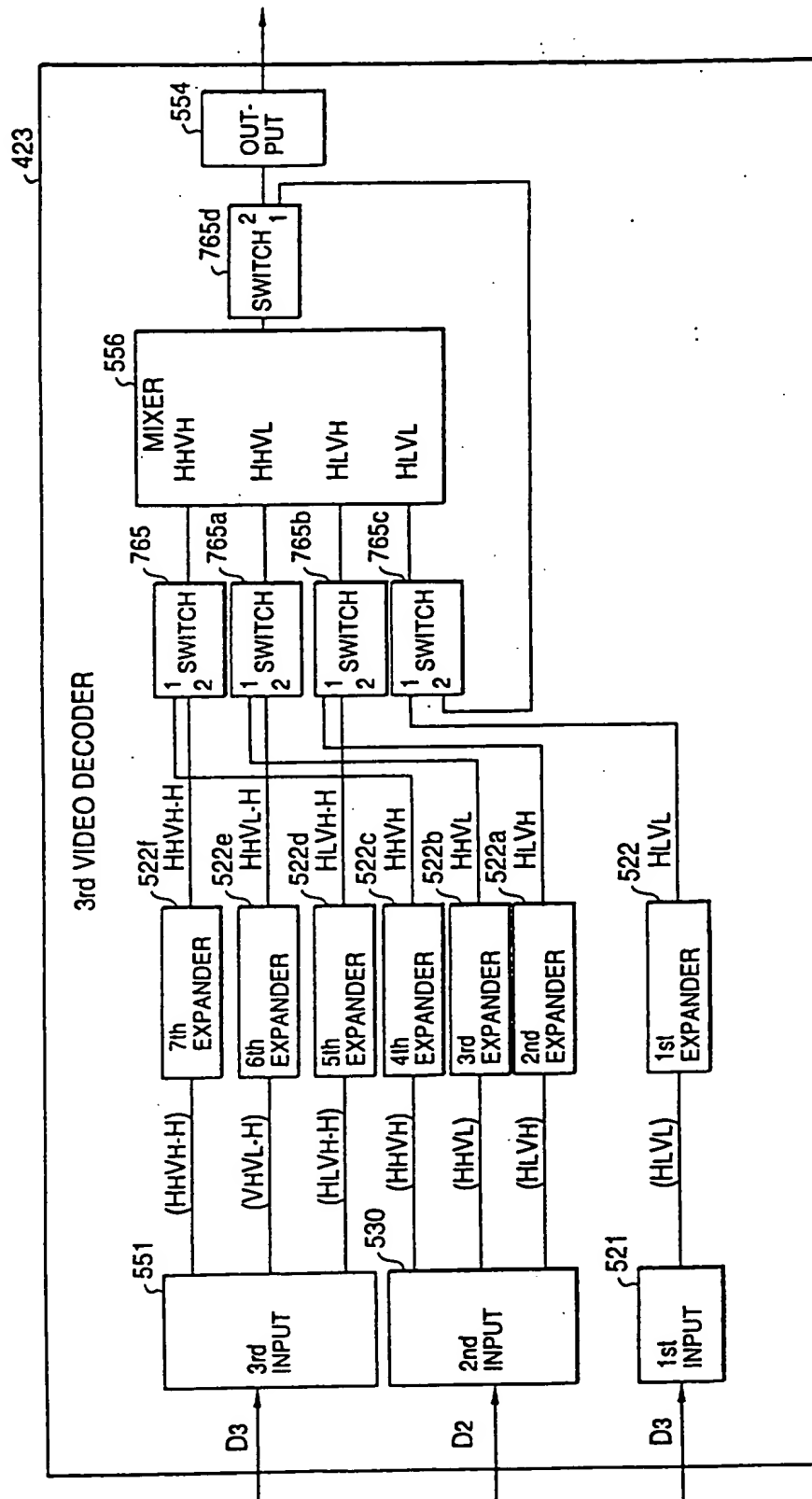


FIG. 73

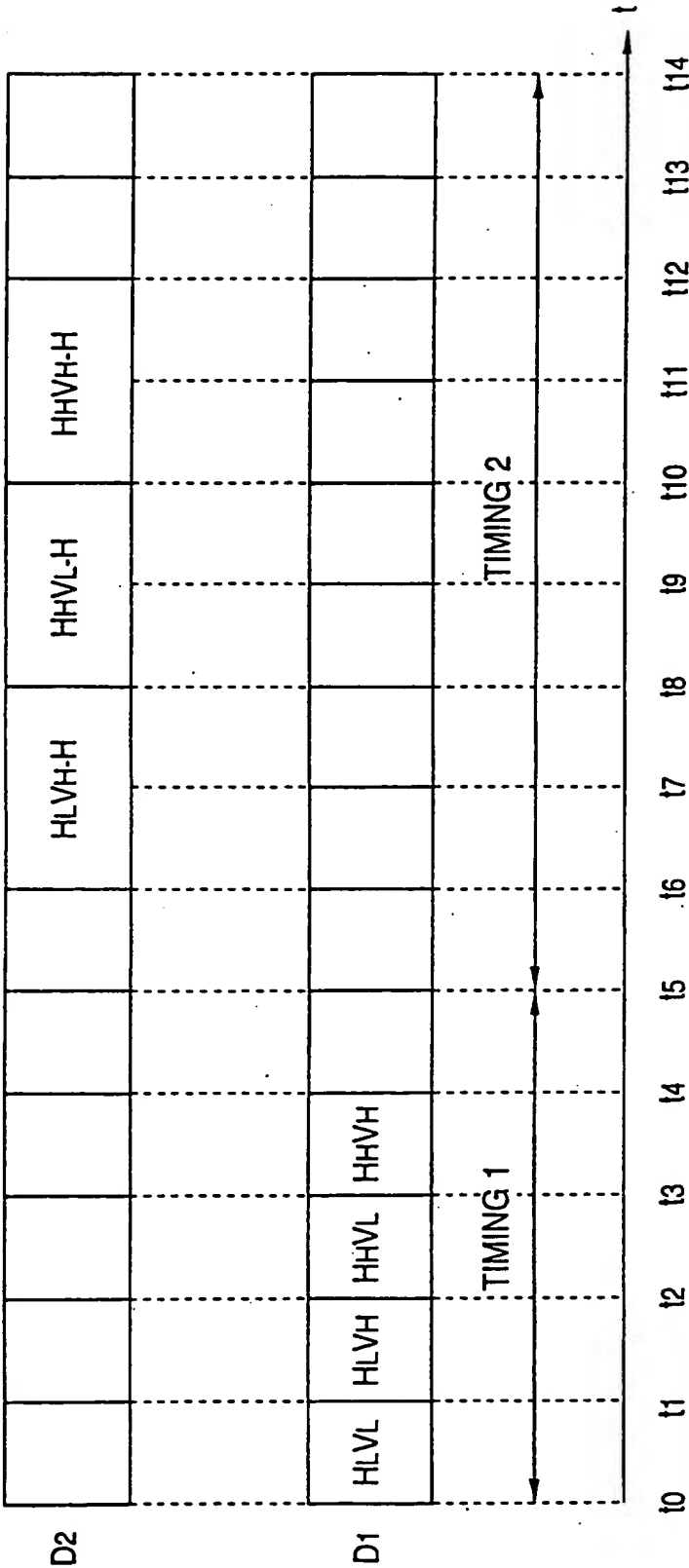


FIG. 74(a)

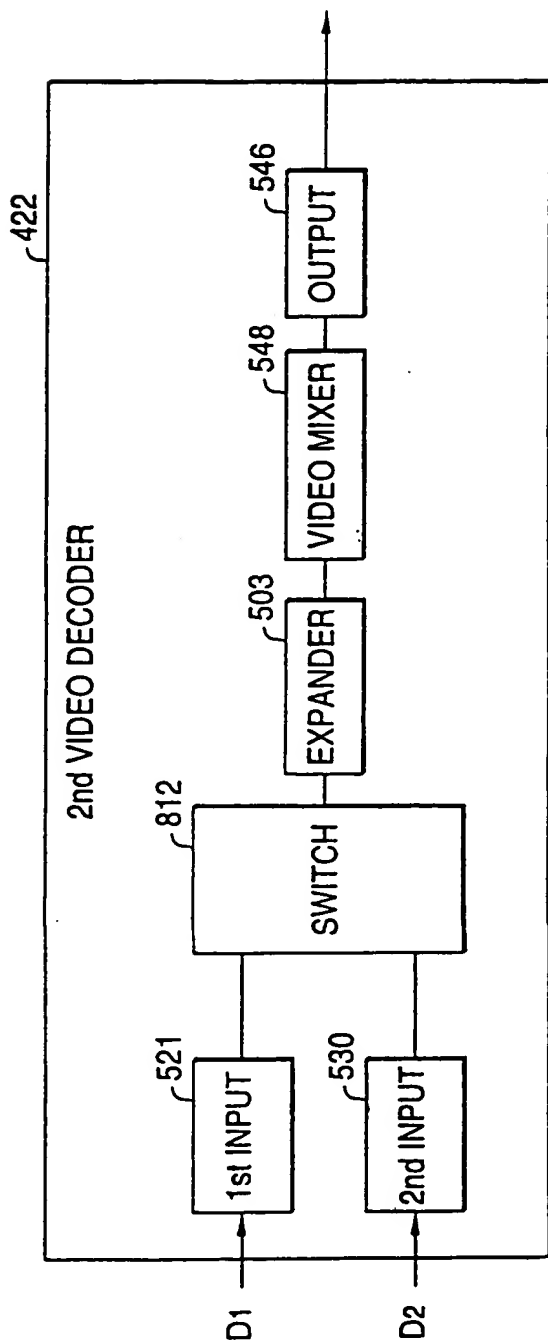


FIG. 74(b)

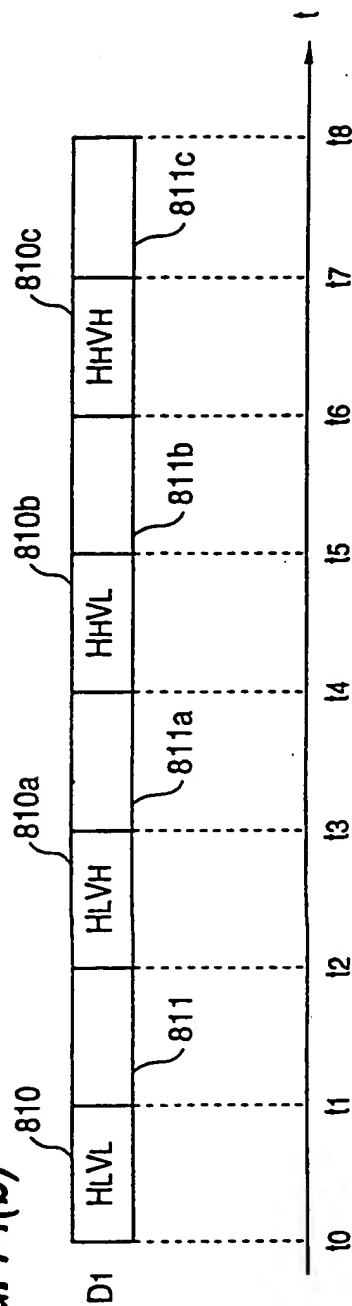


FIG. 75

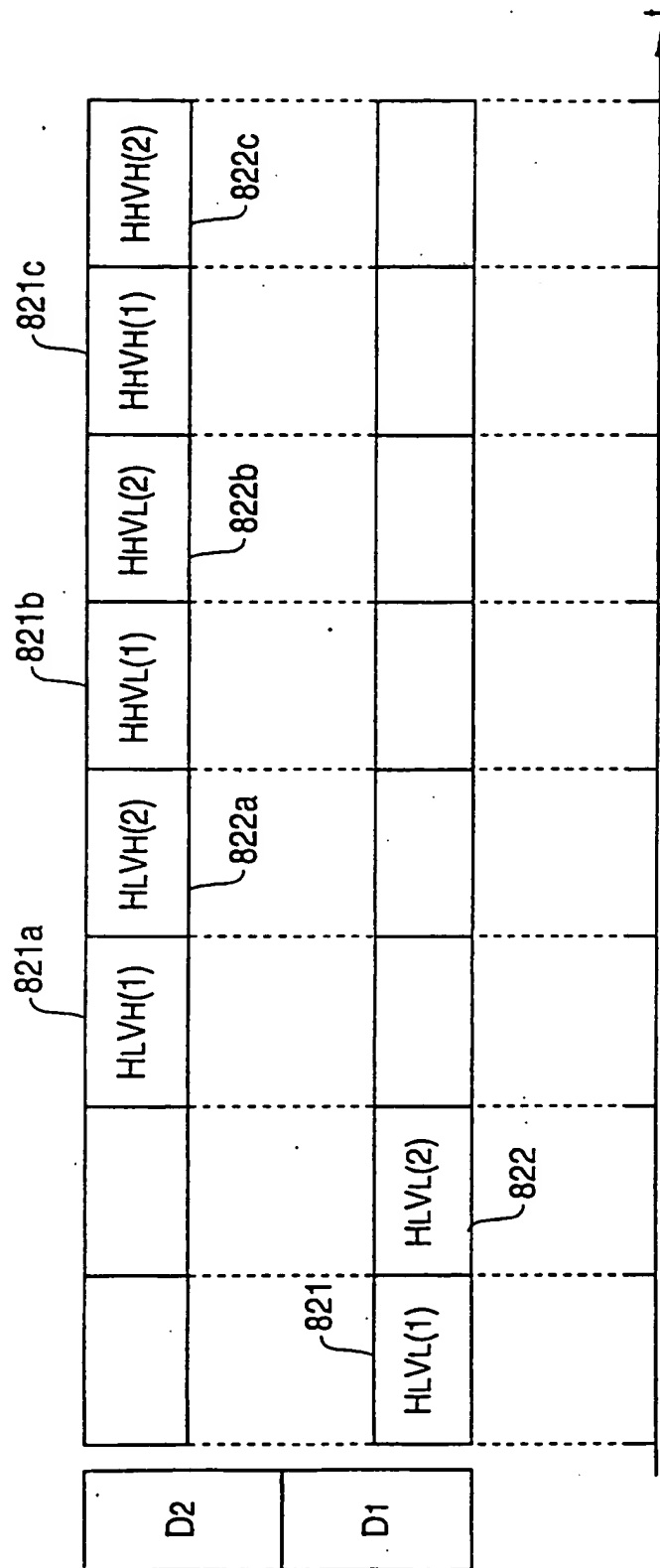


FIG. 76

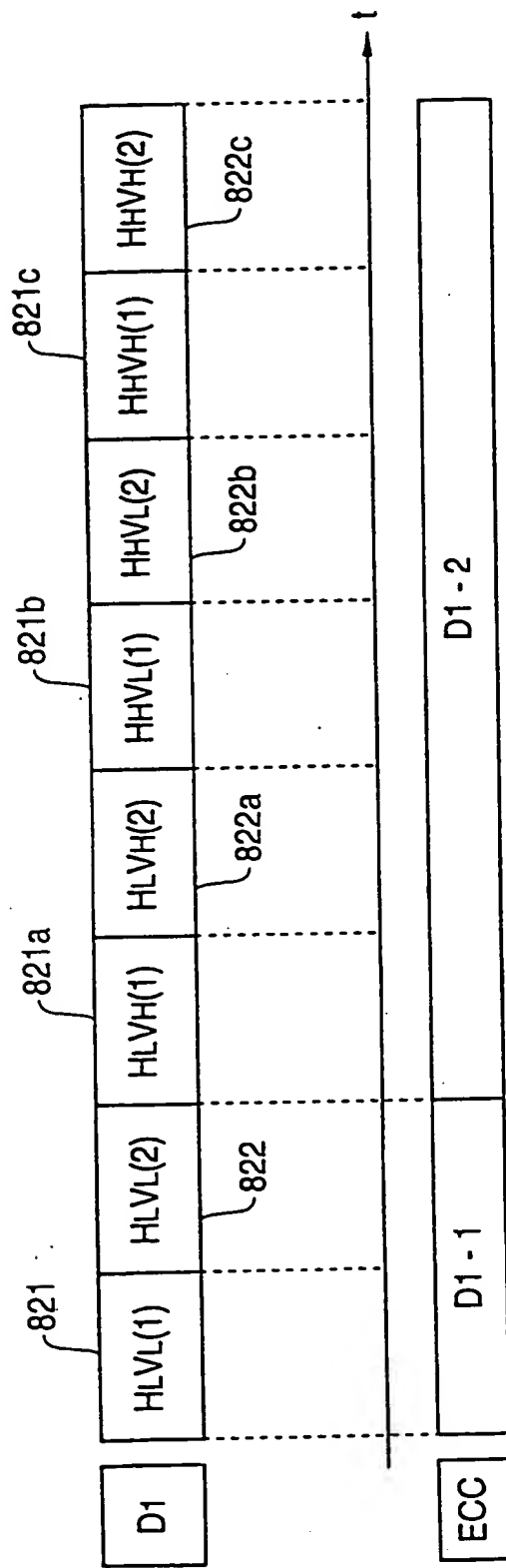


FIG. 77

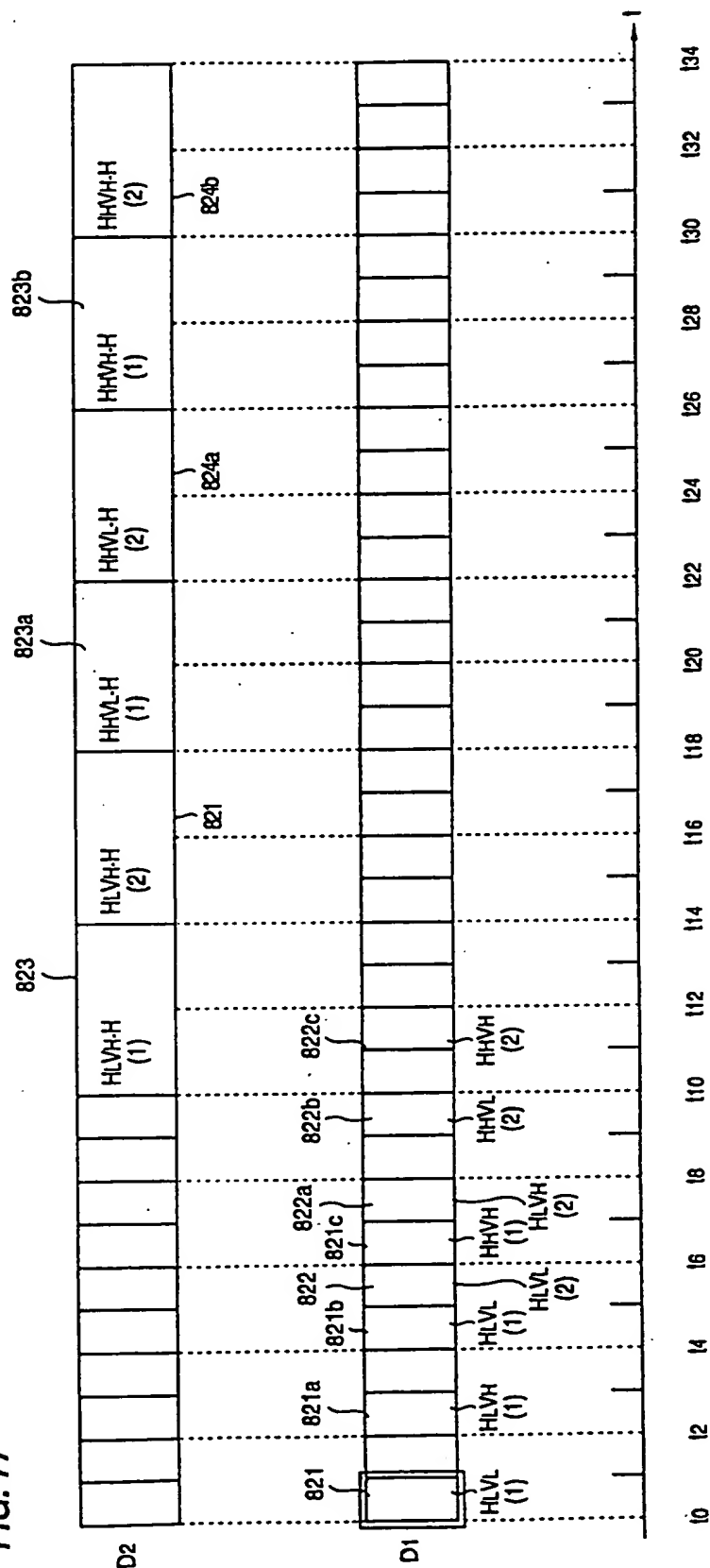


FIG. 78

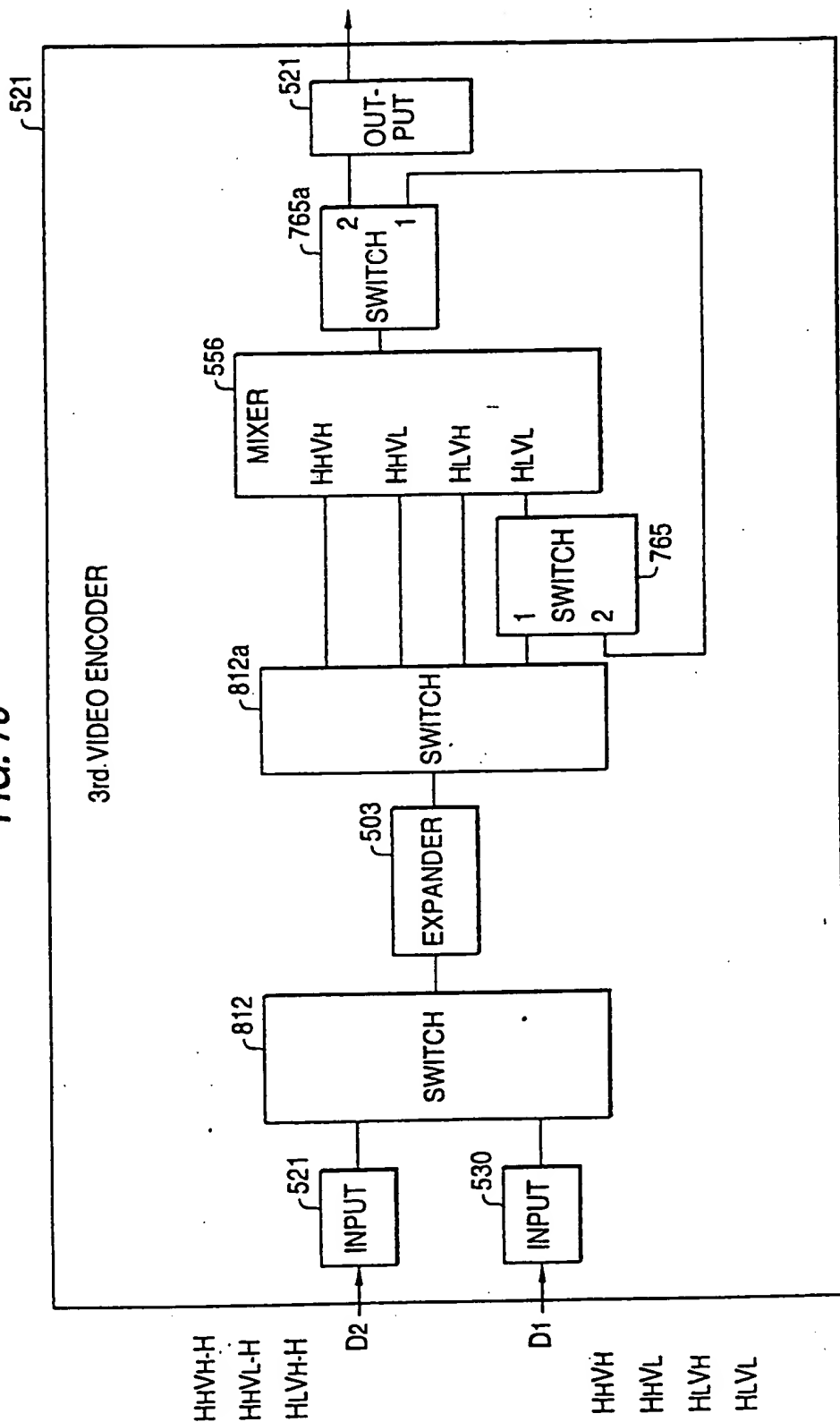


FIG. 79

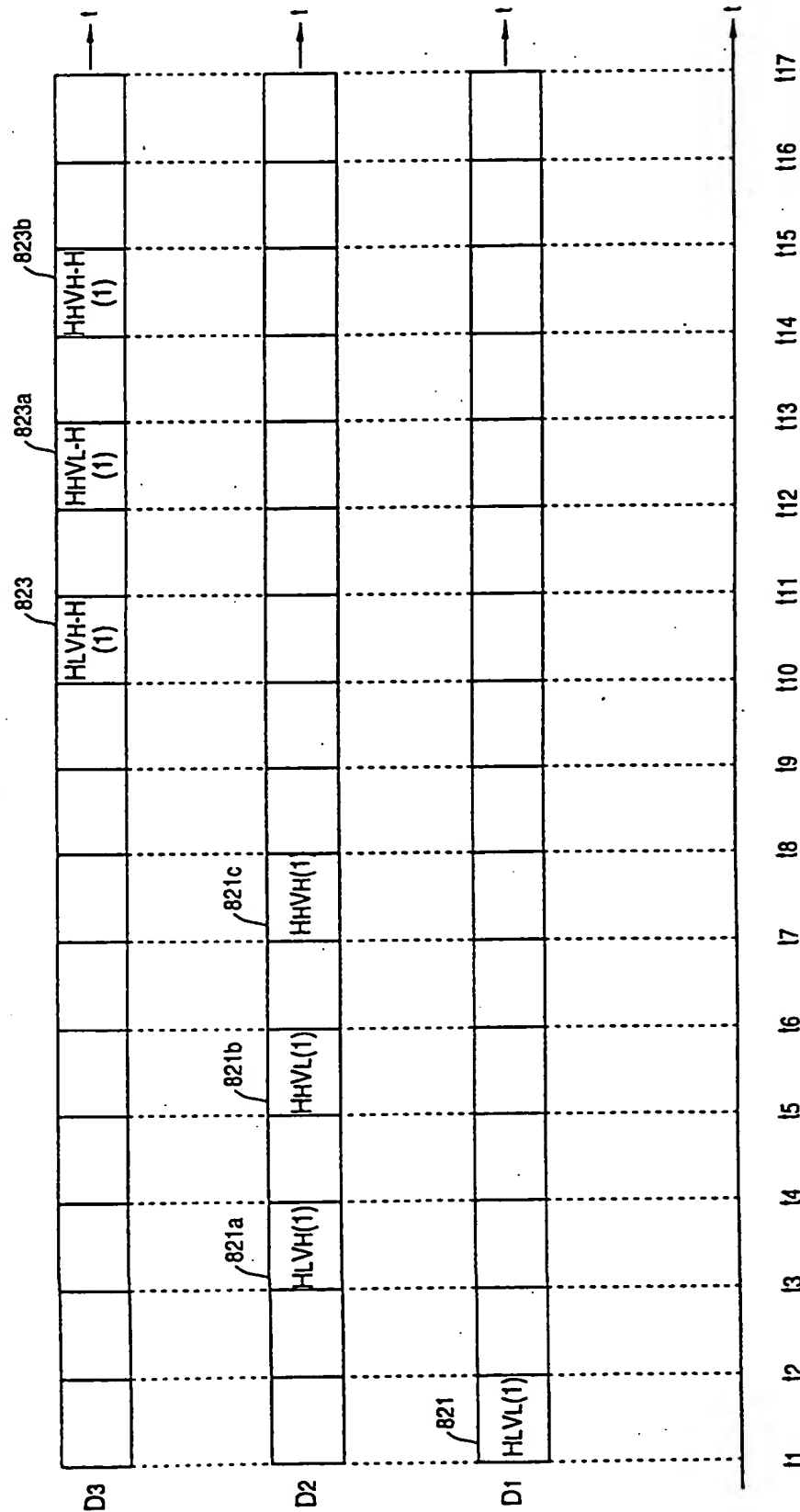


FIG. 80

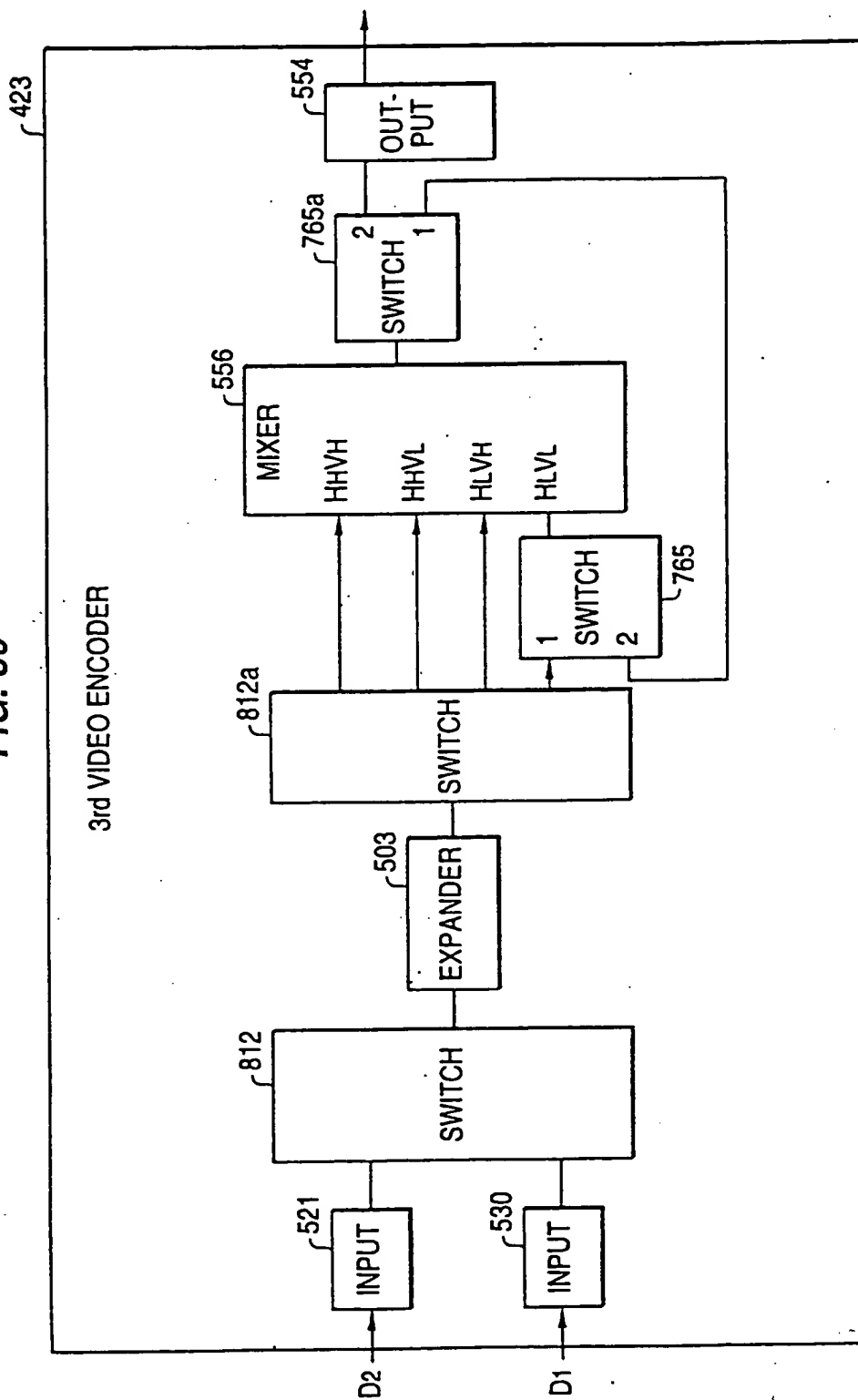


FIG. 81

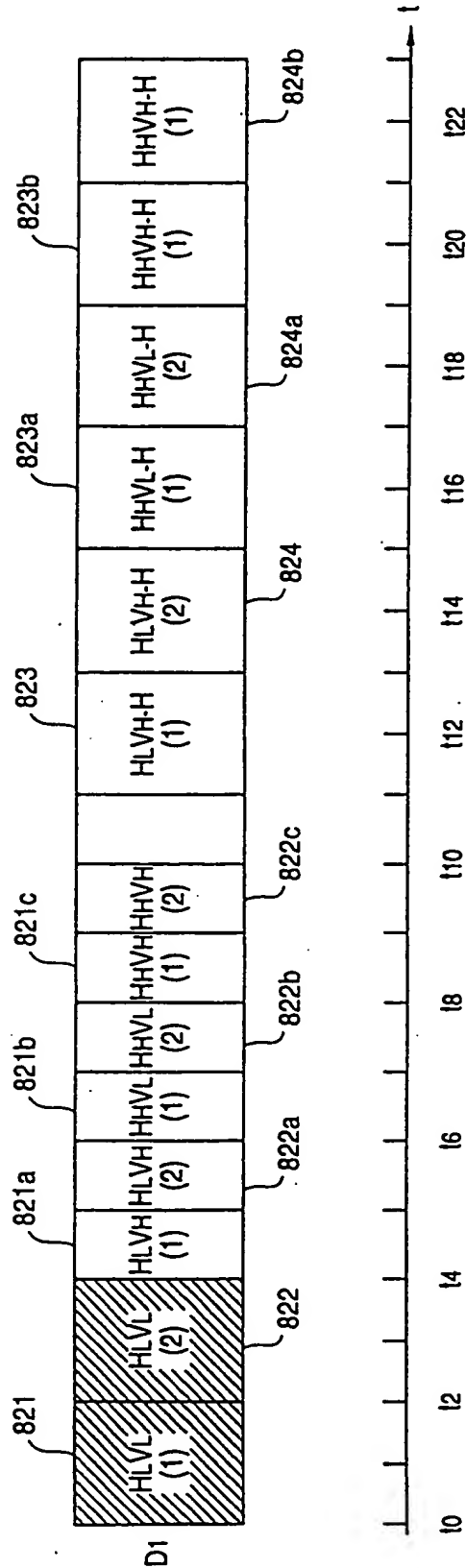


FIG. 82

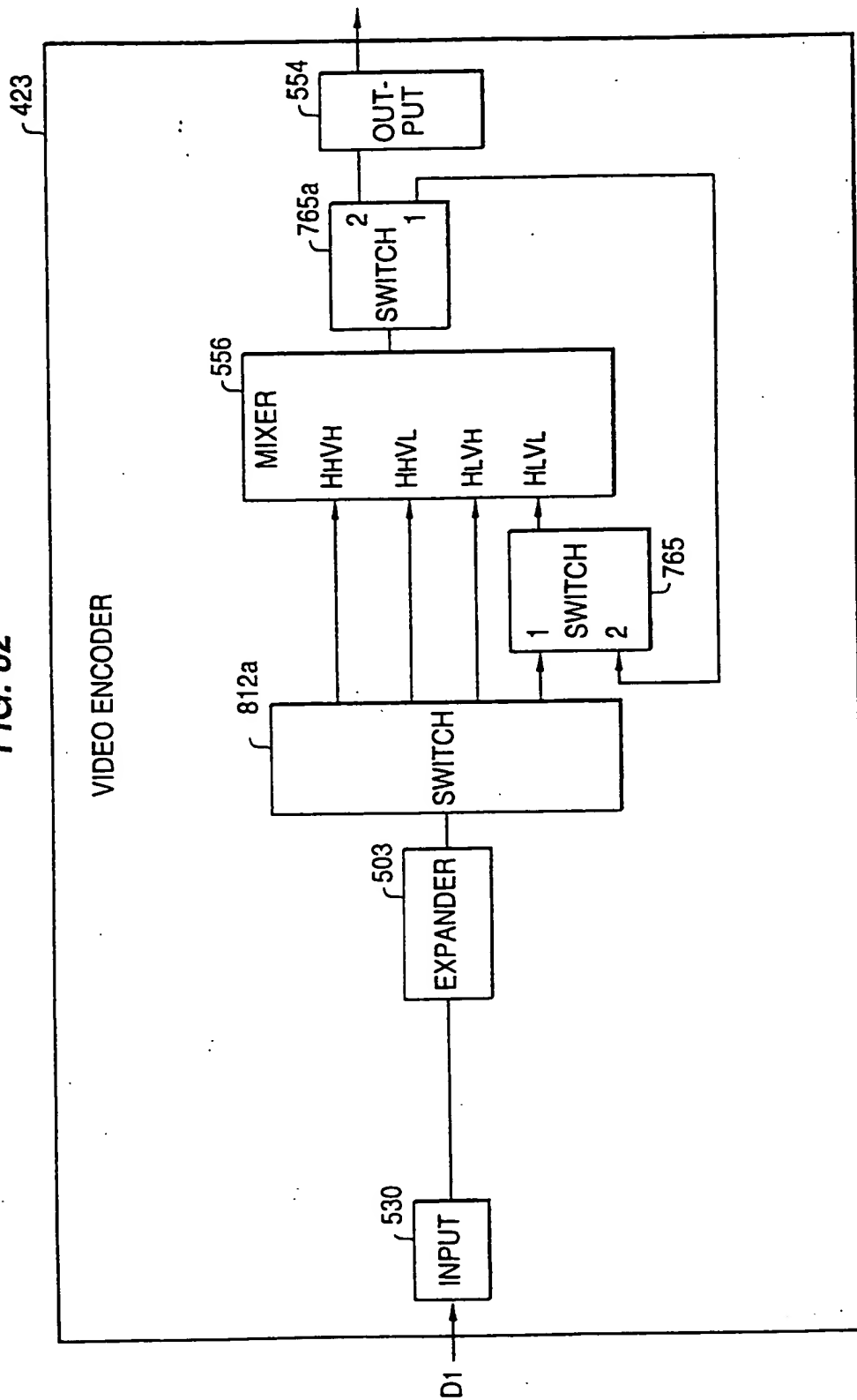


FIG. 83

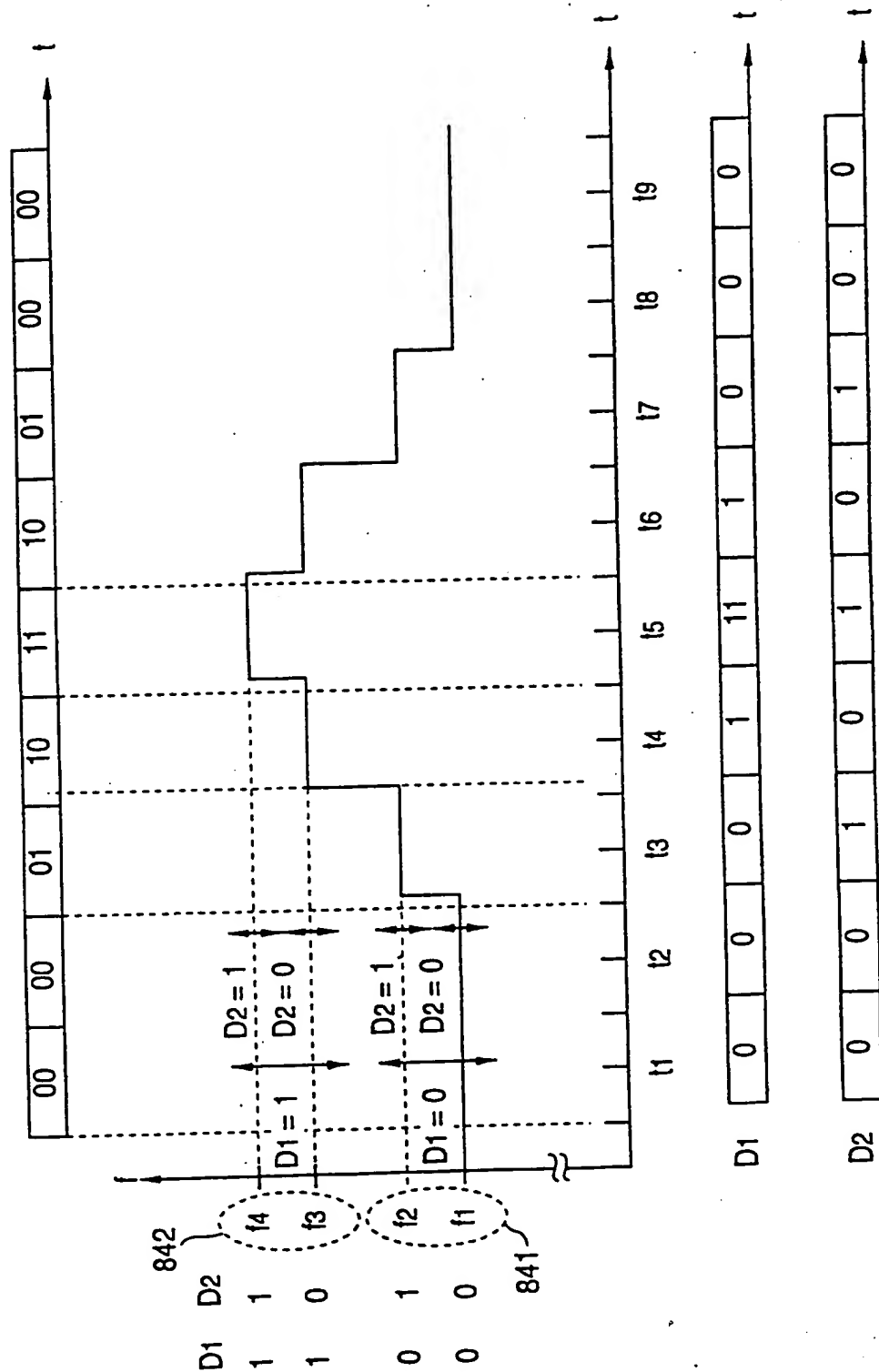


FIG. 84

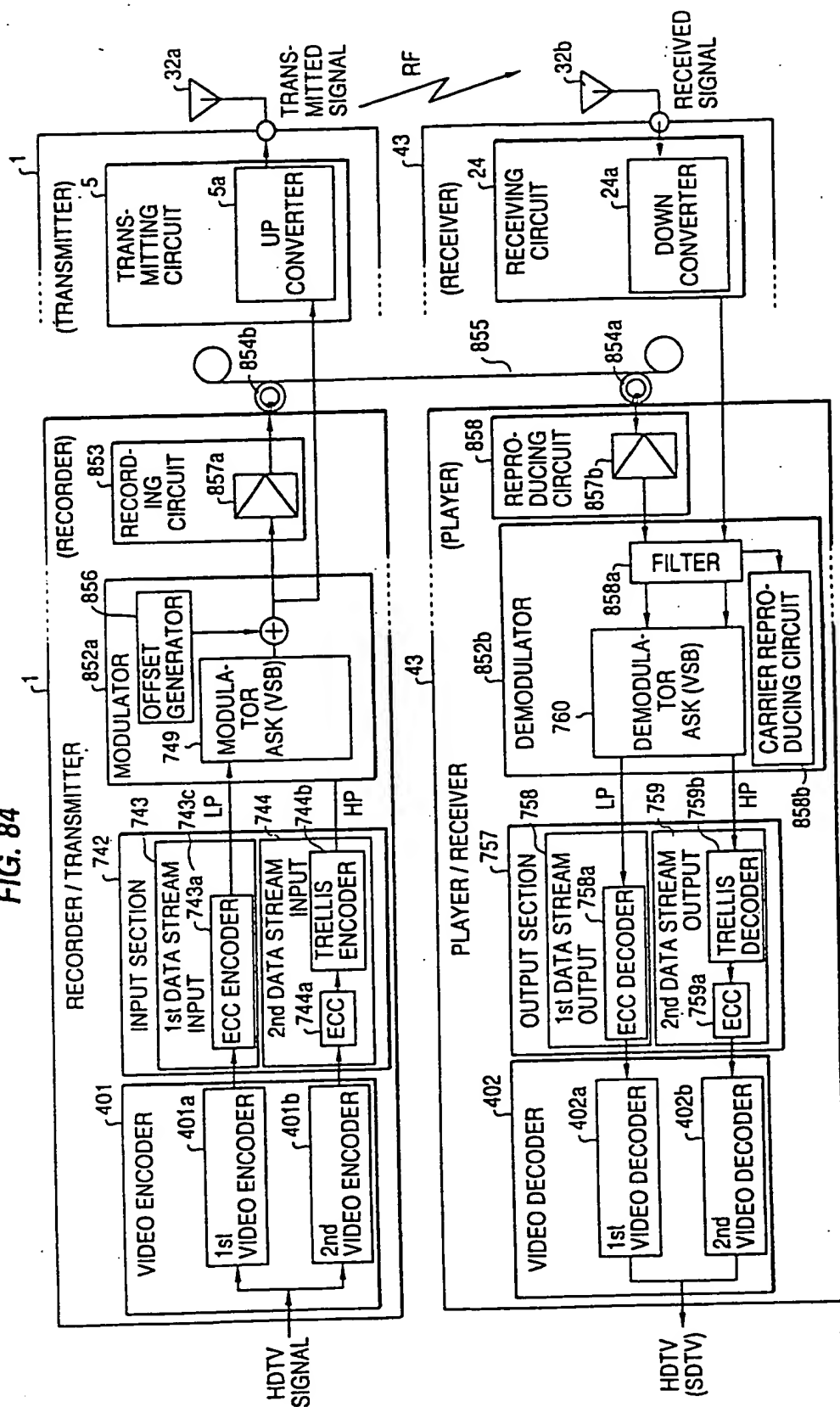


FIG. 85

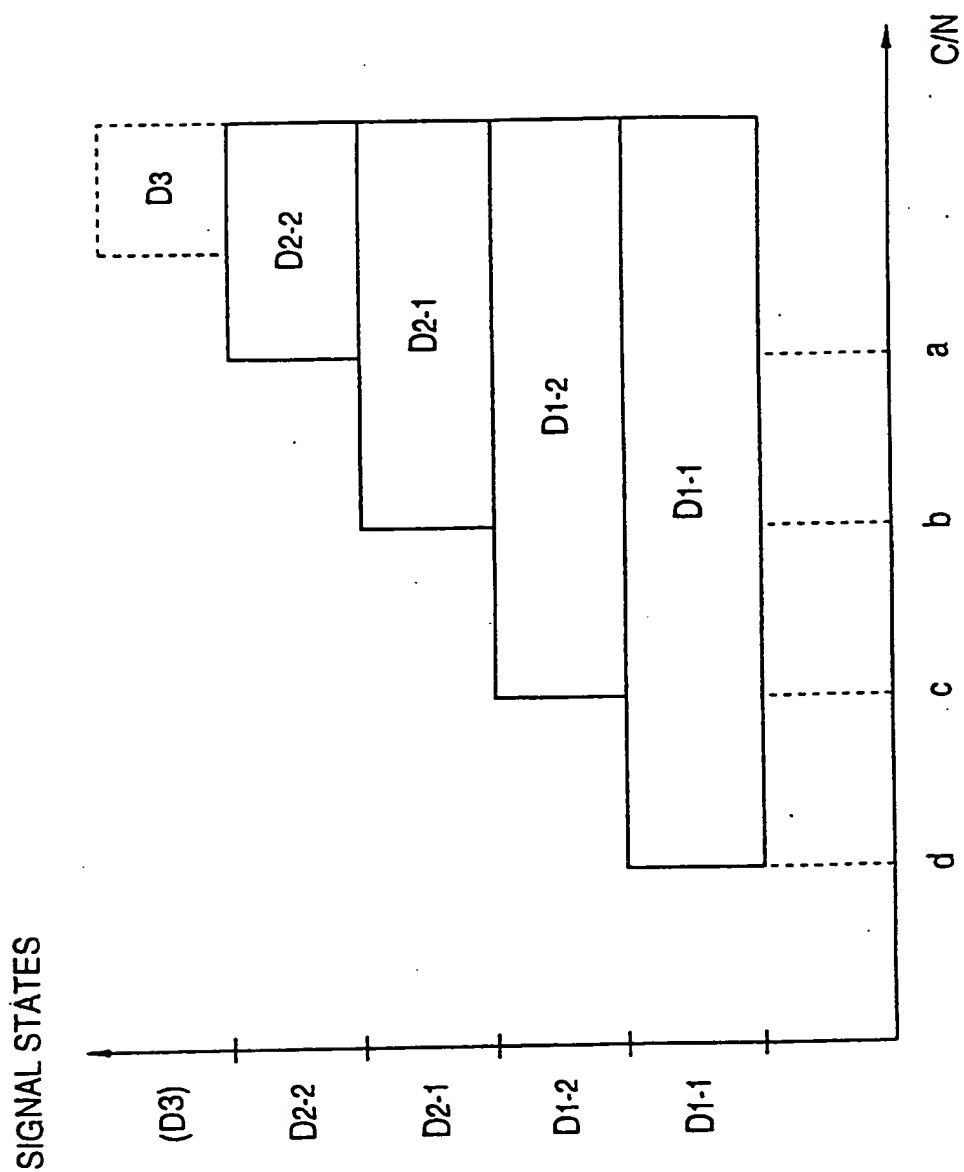


FIG. 86

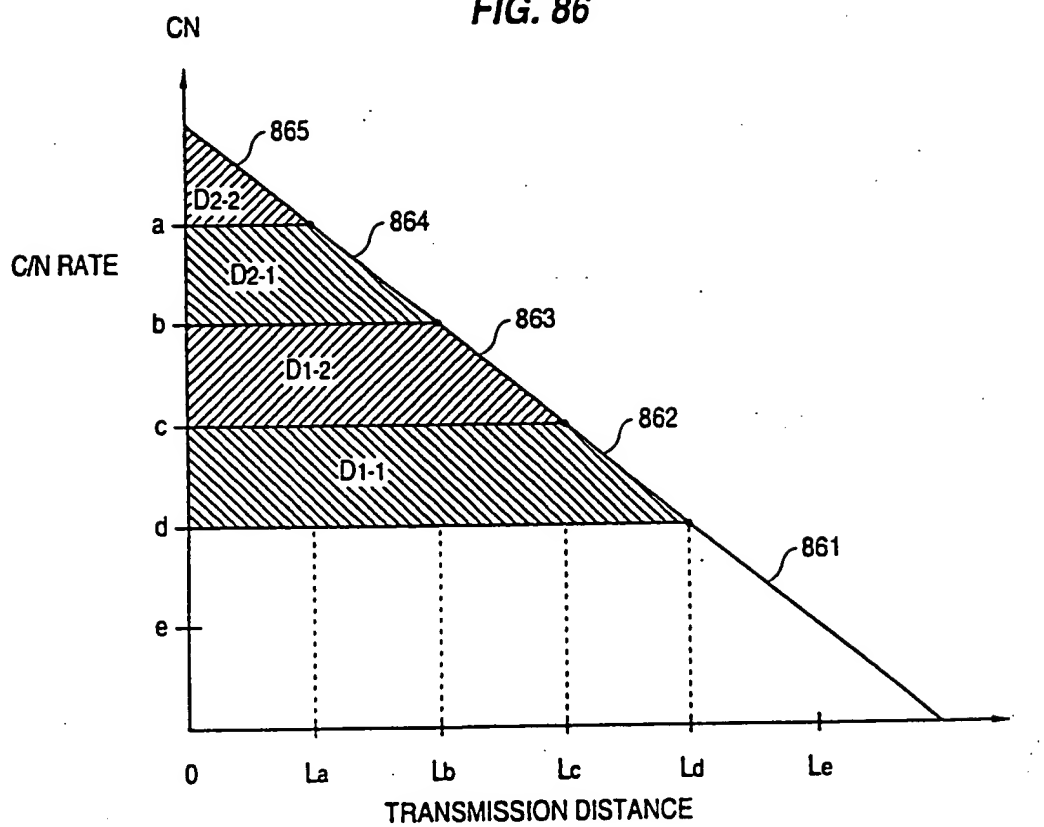


FIG. 87

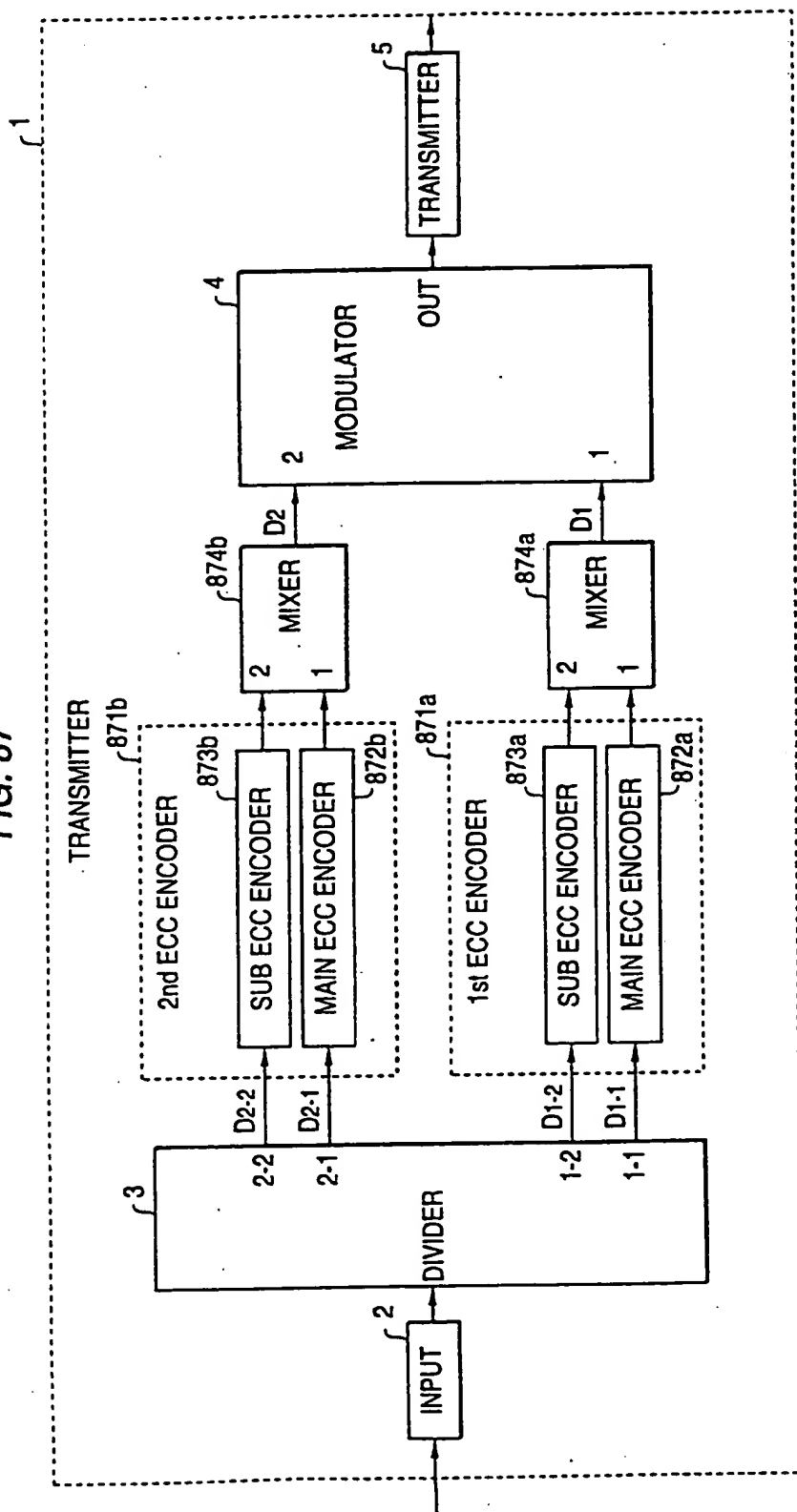


FIG. 88

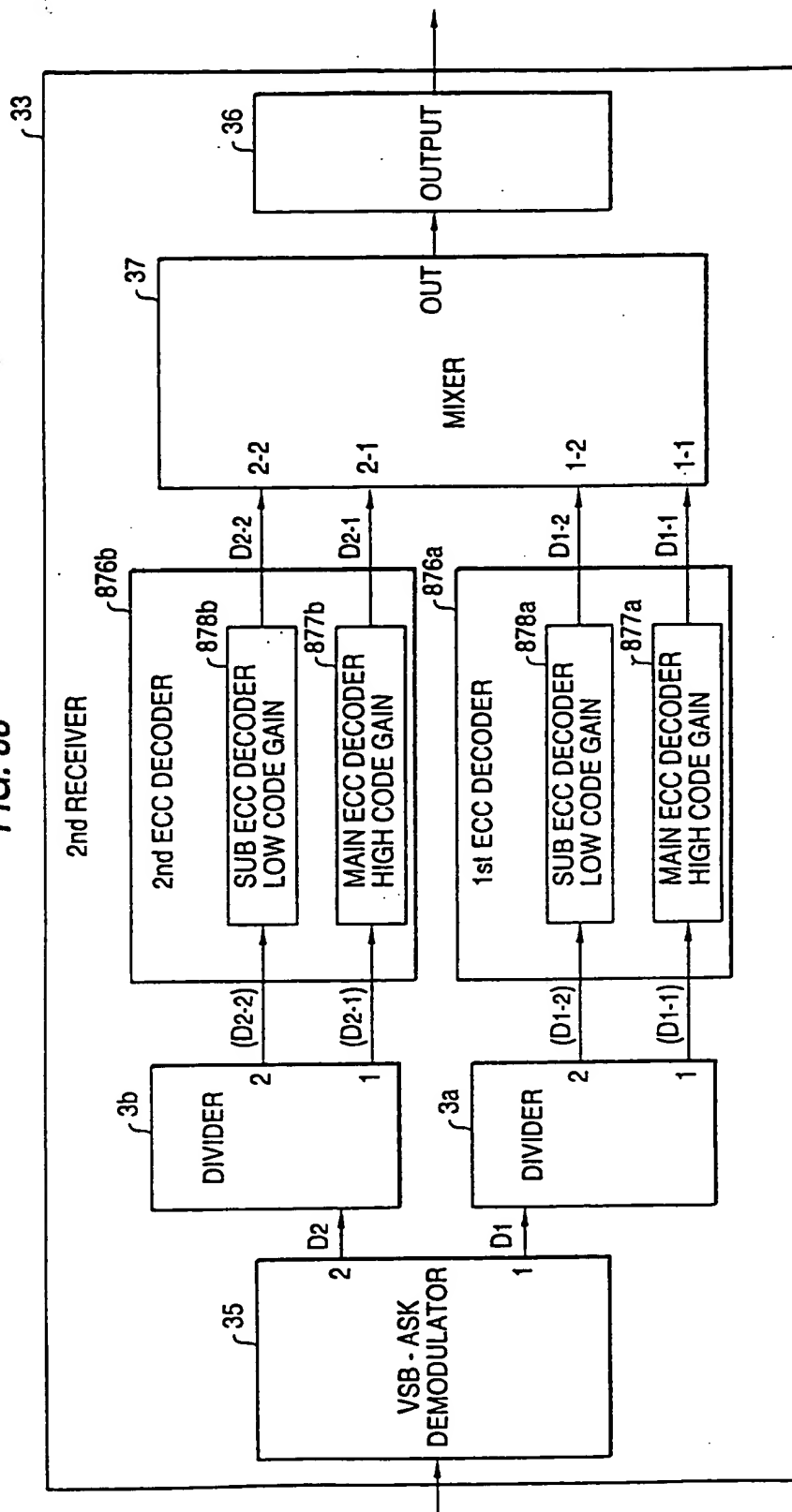


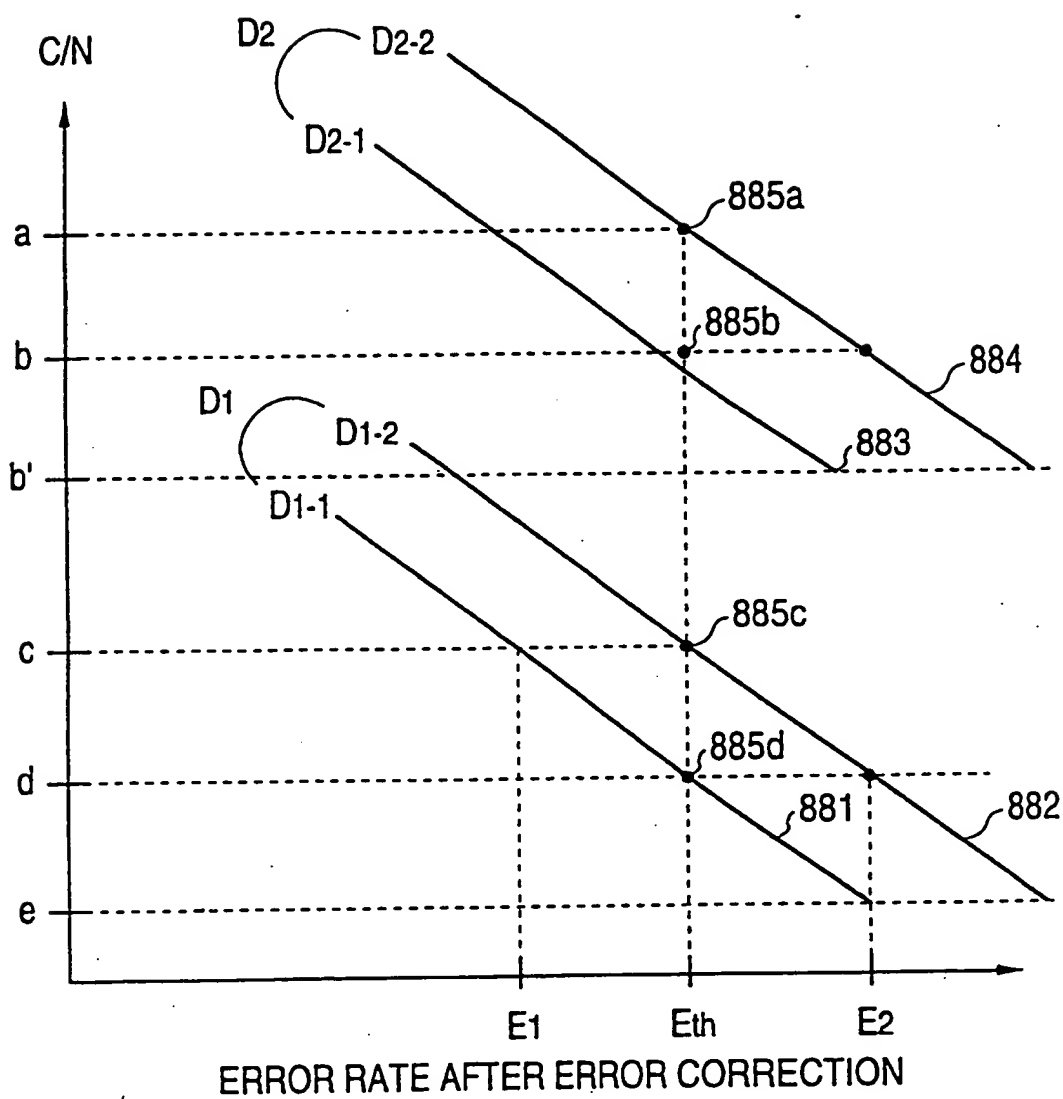
FIG. 89

FIG. 90

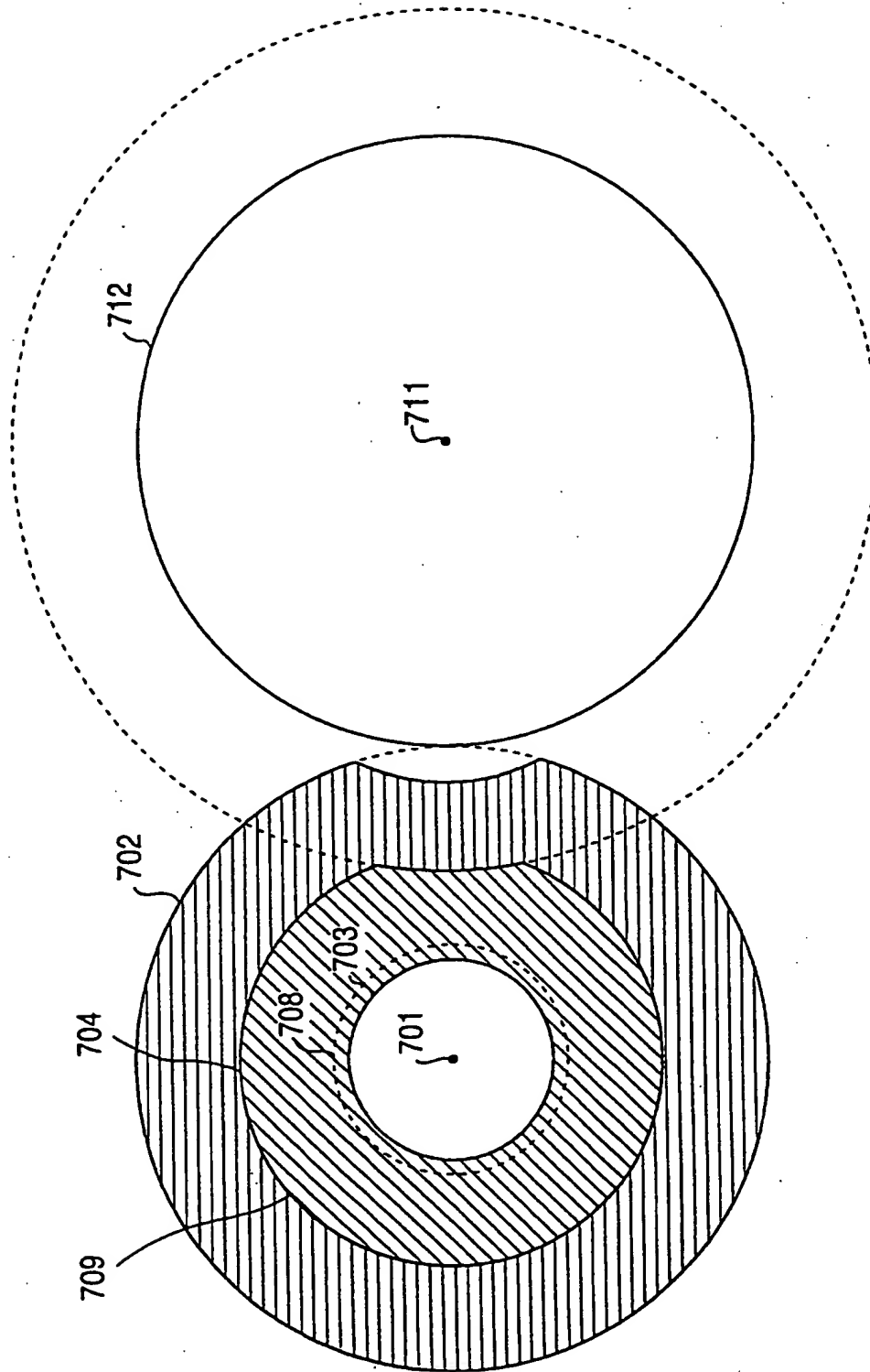


FIG. 91

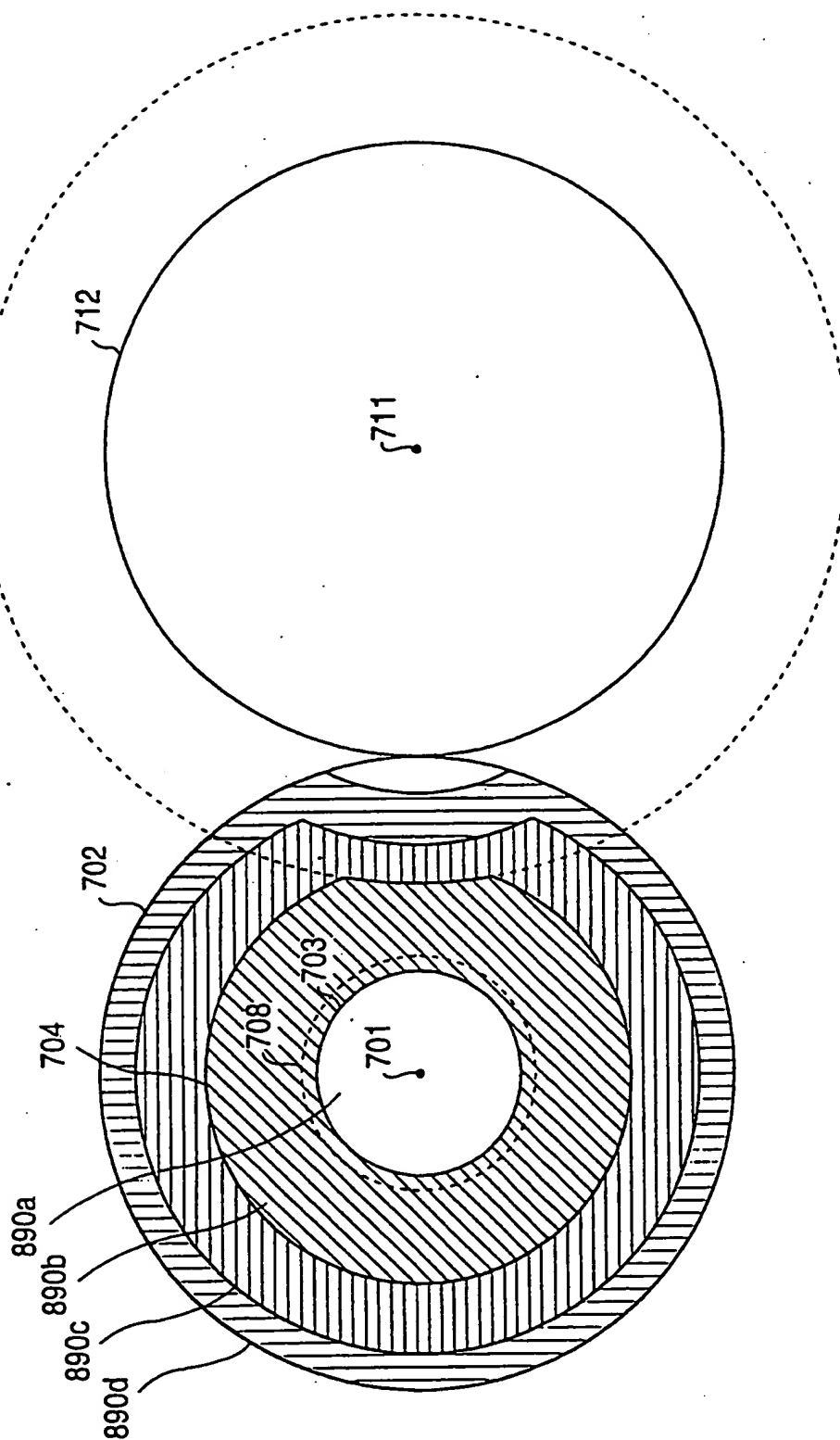


FIG. 92

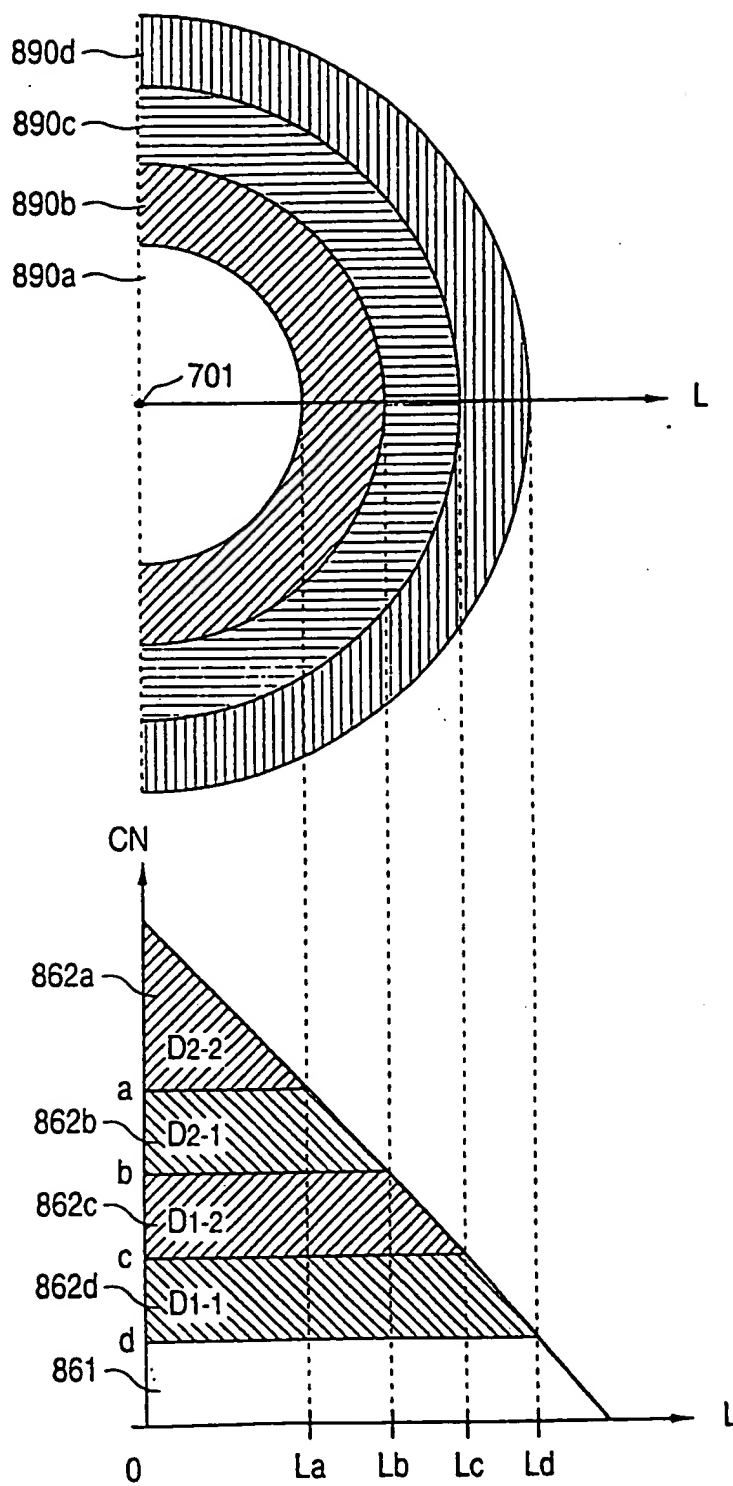


FIG. 93 (Amended)

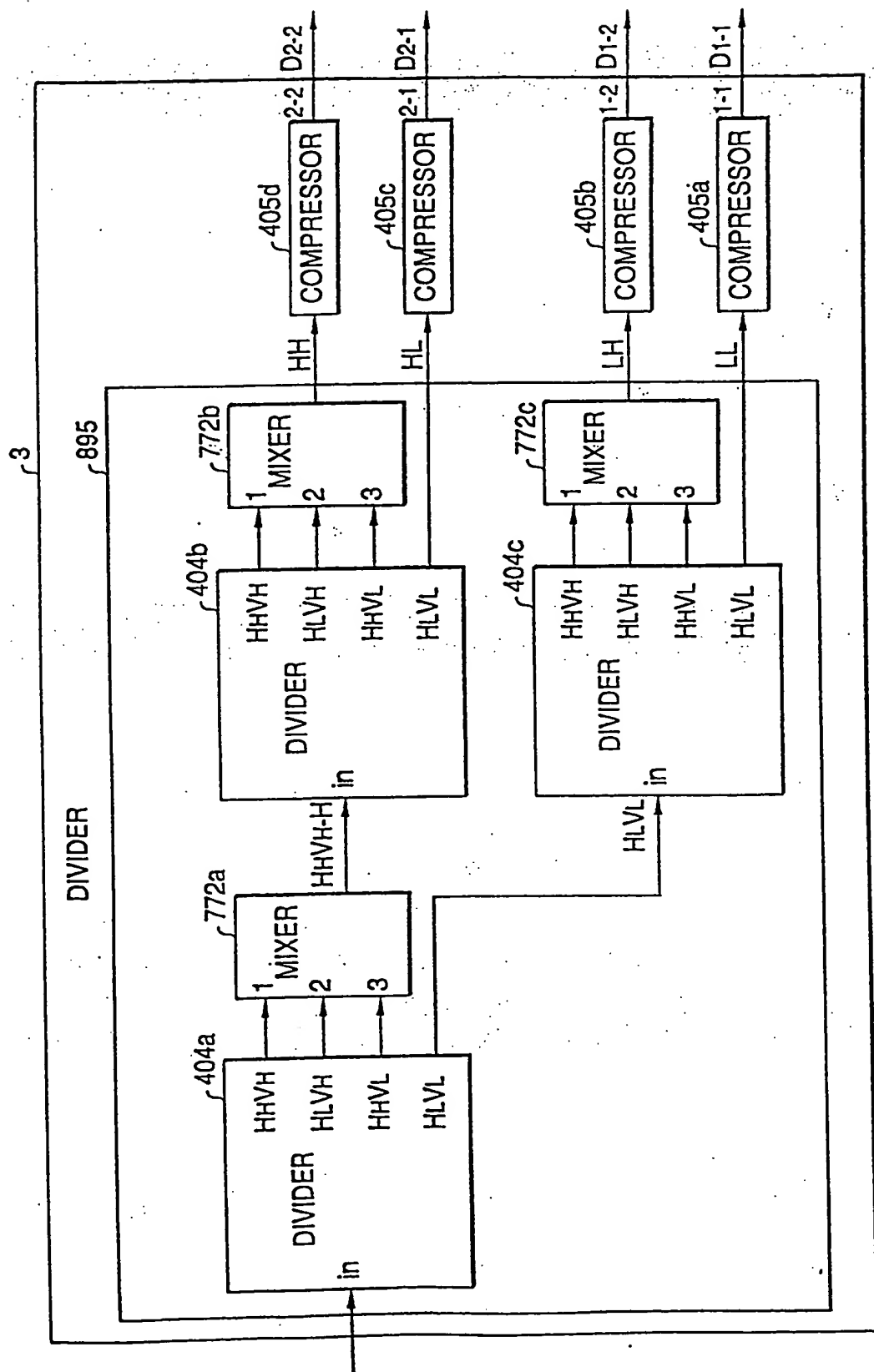


FIG. 94

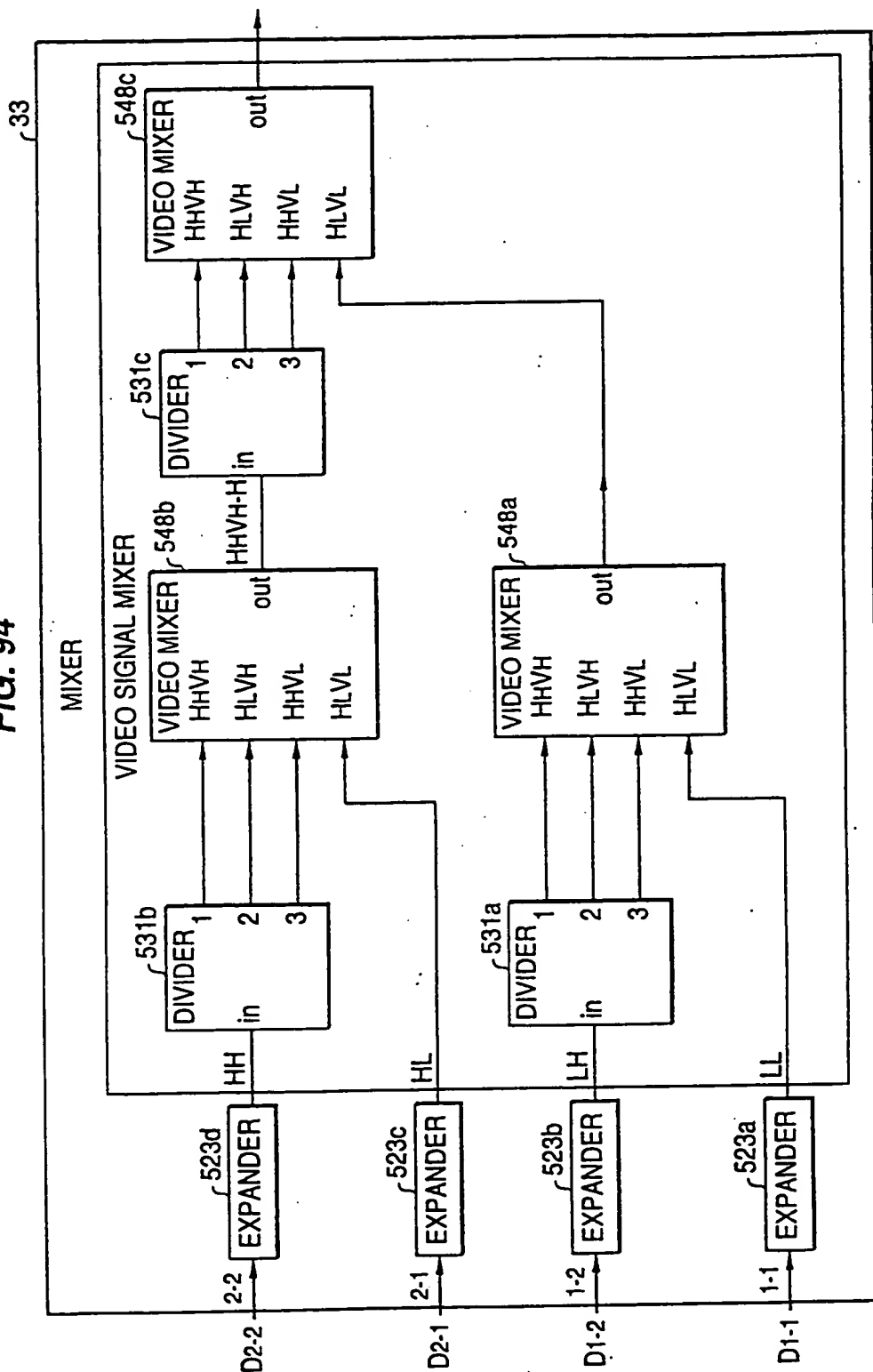


FIG. 95

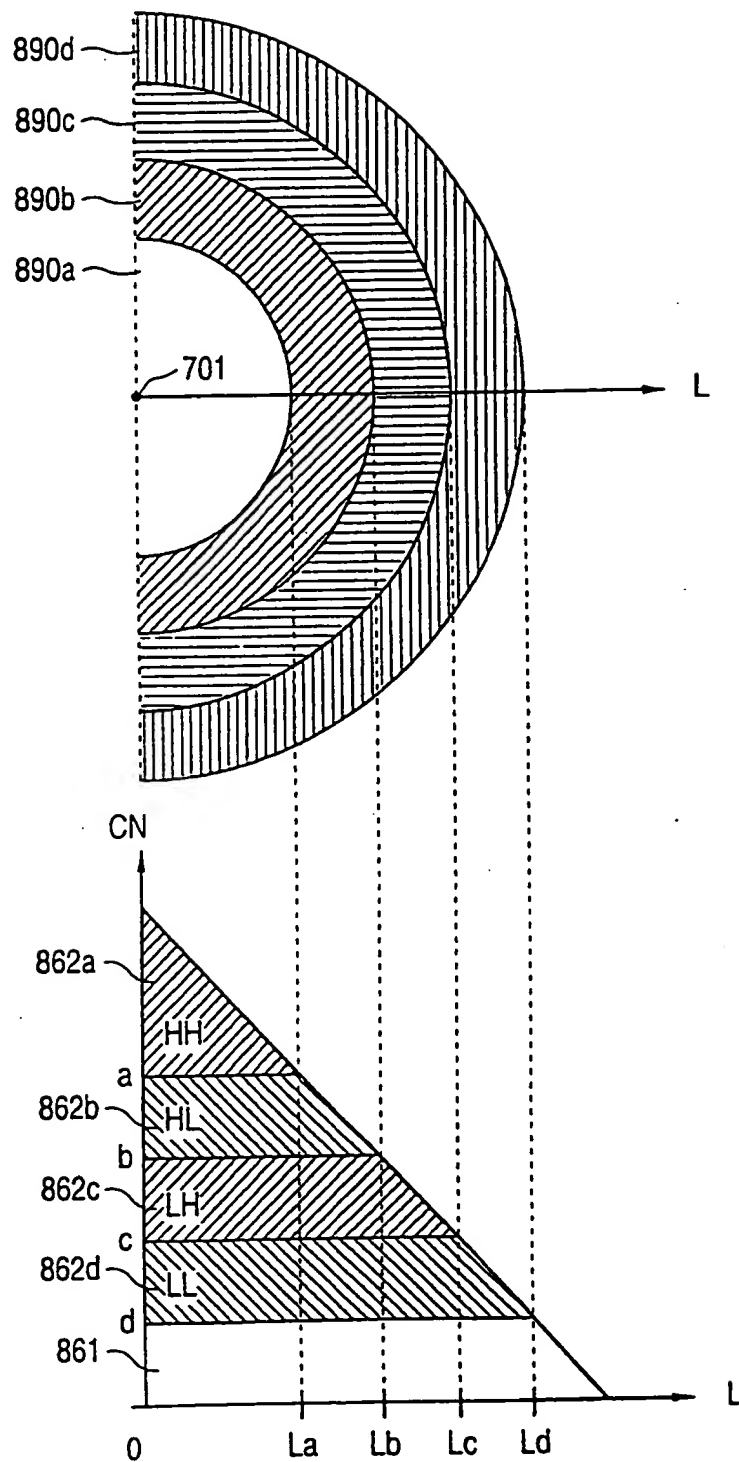


FIG. 96

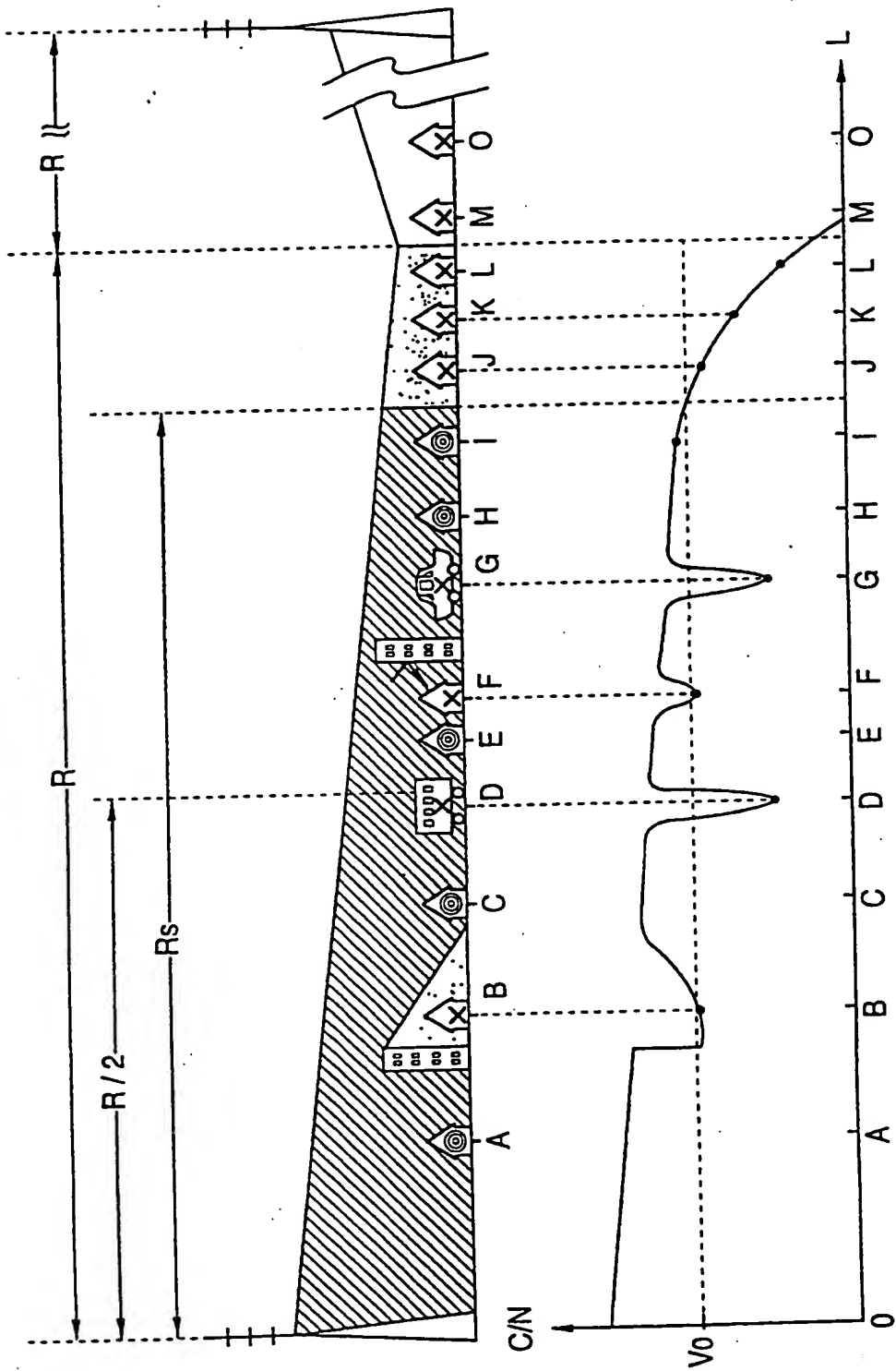


FIG. 97

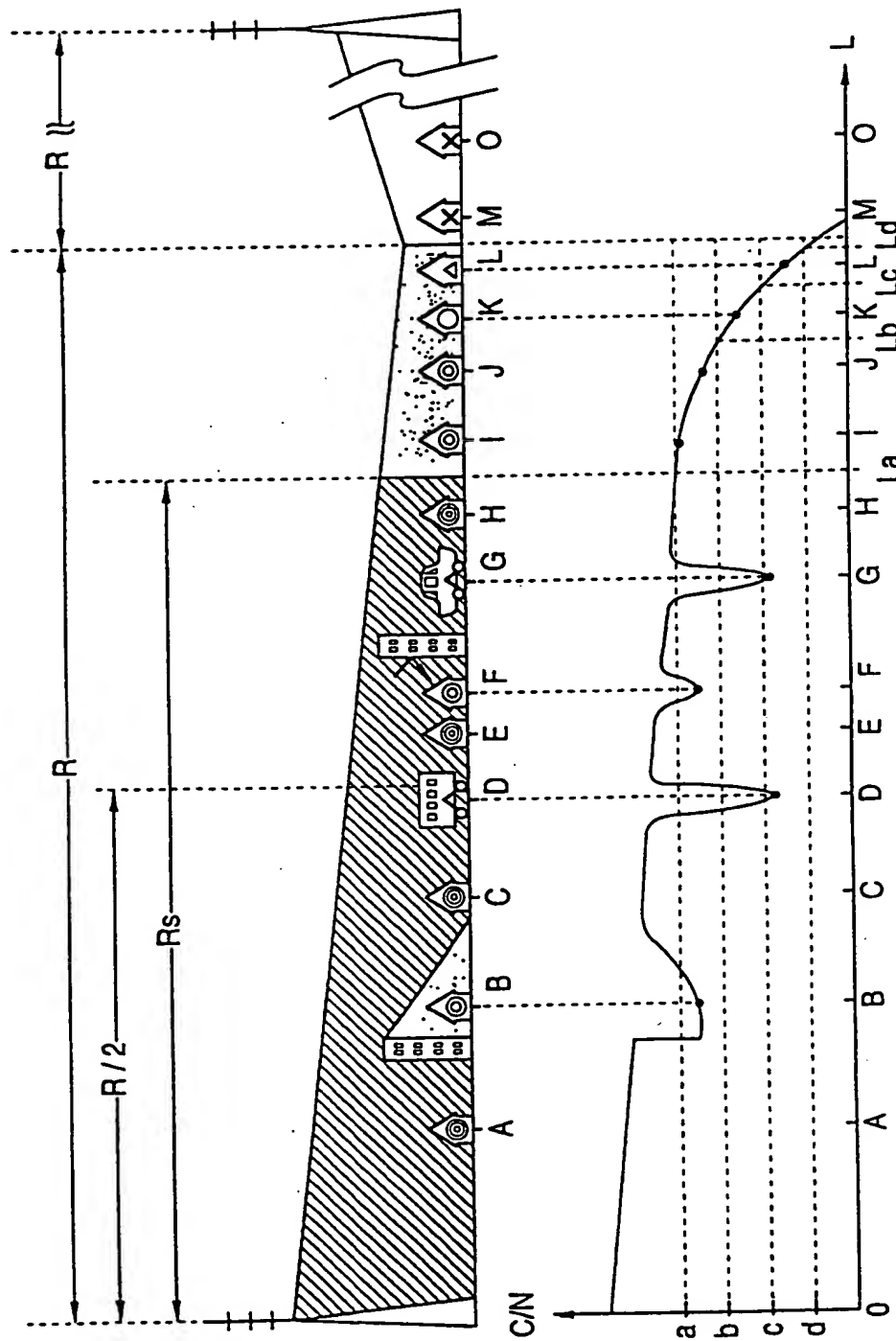


FIG. 98

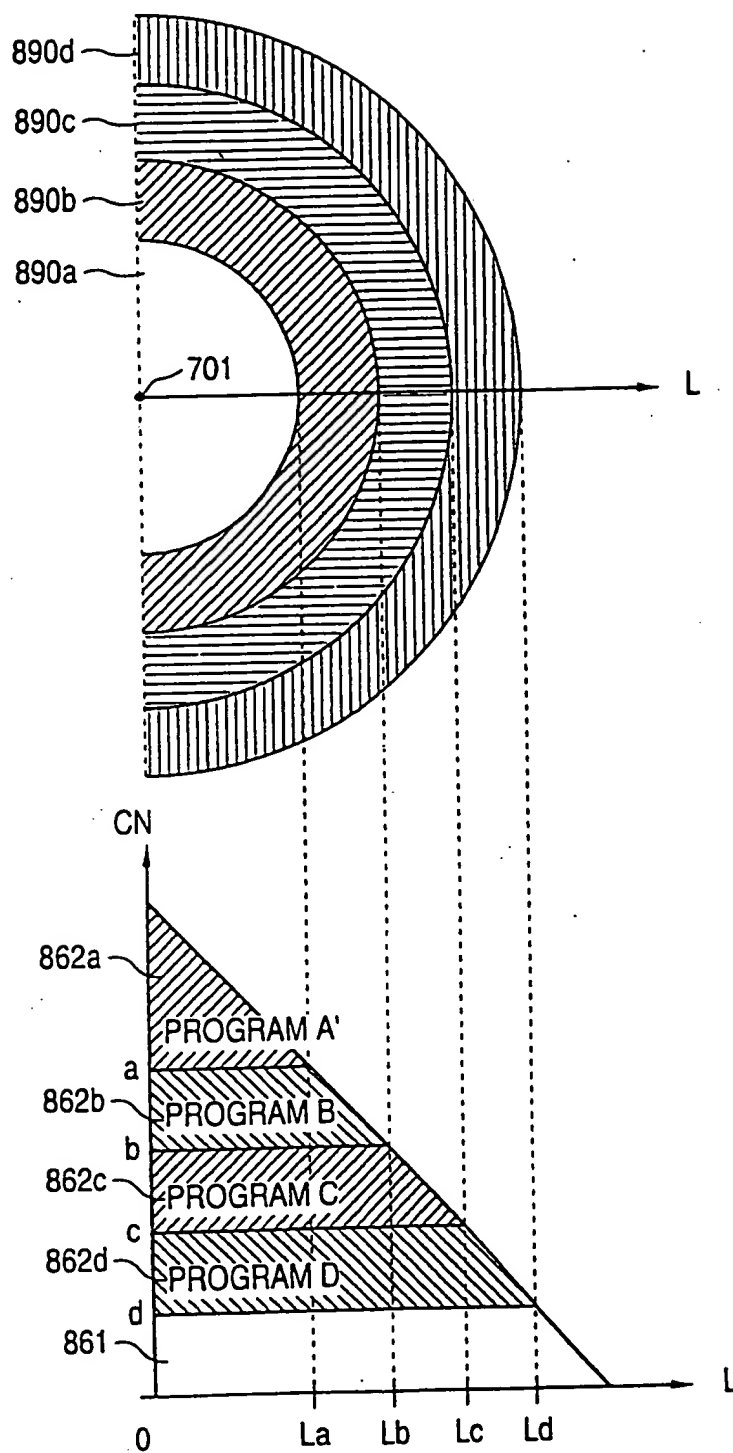


FIG. 99

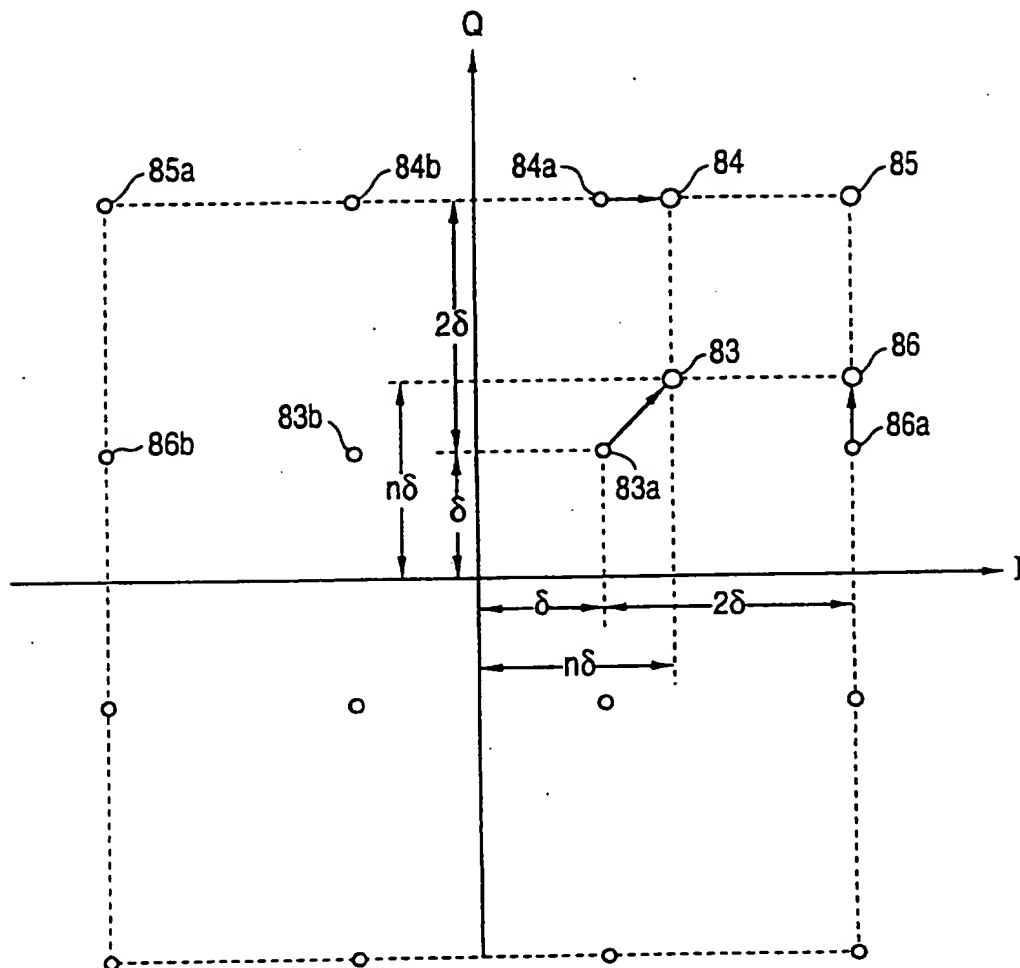


FIG. 100

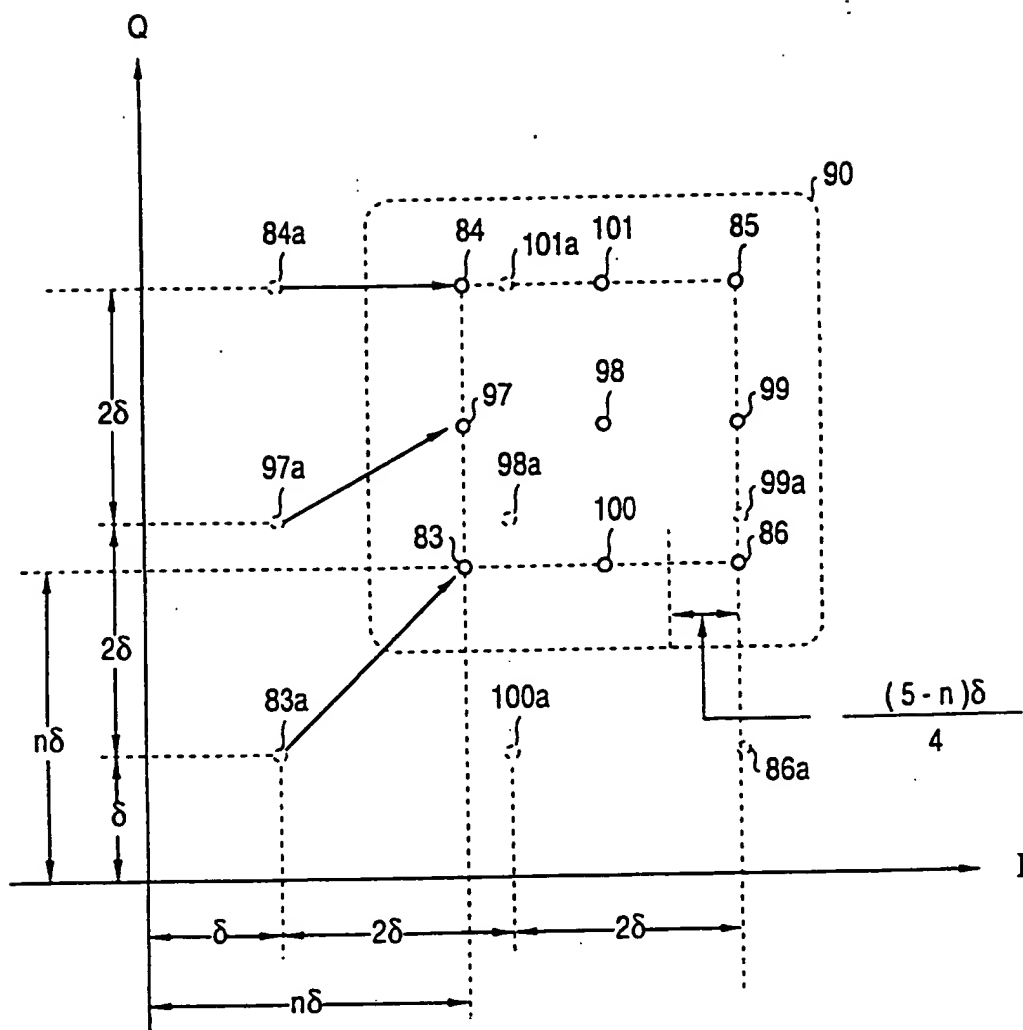


FIG. 101

Pe

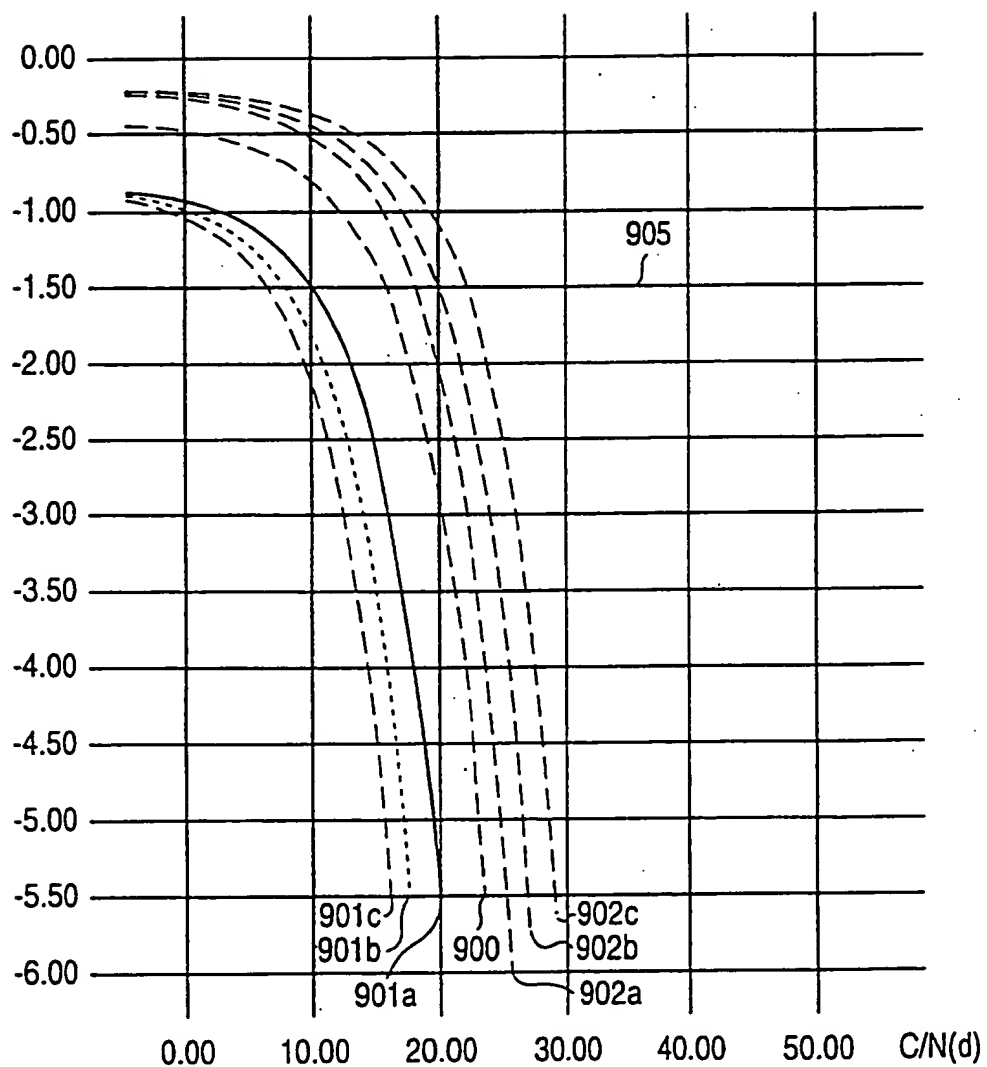


FIG. 102

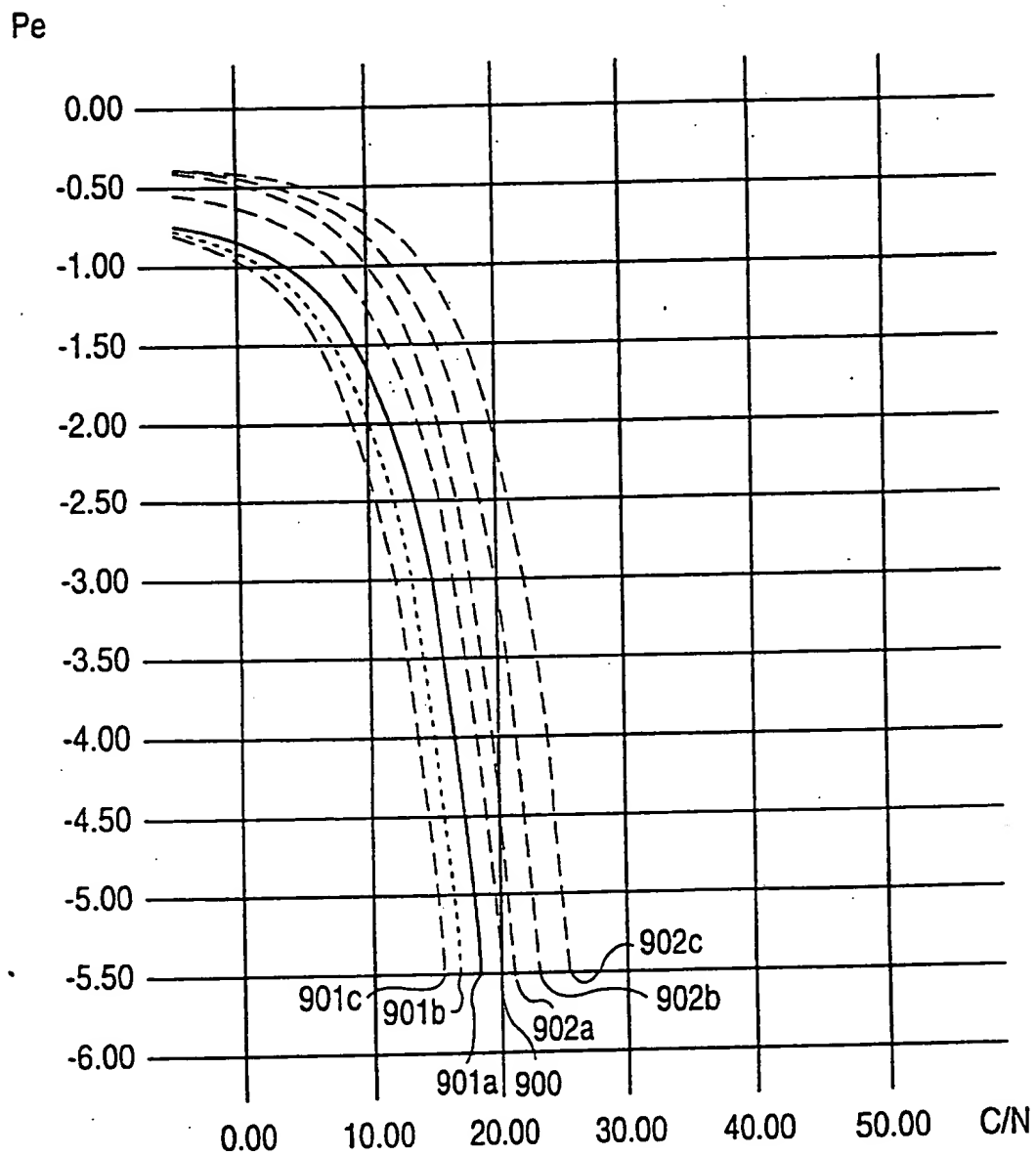


FIG. 103

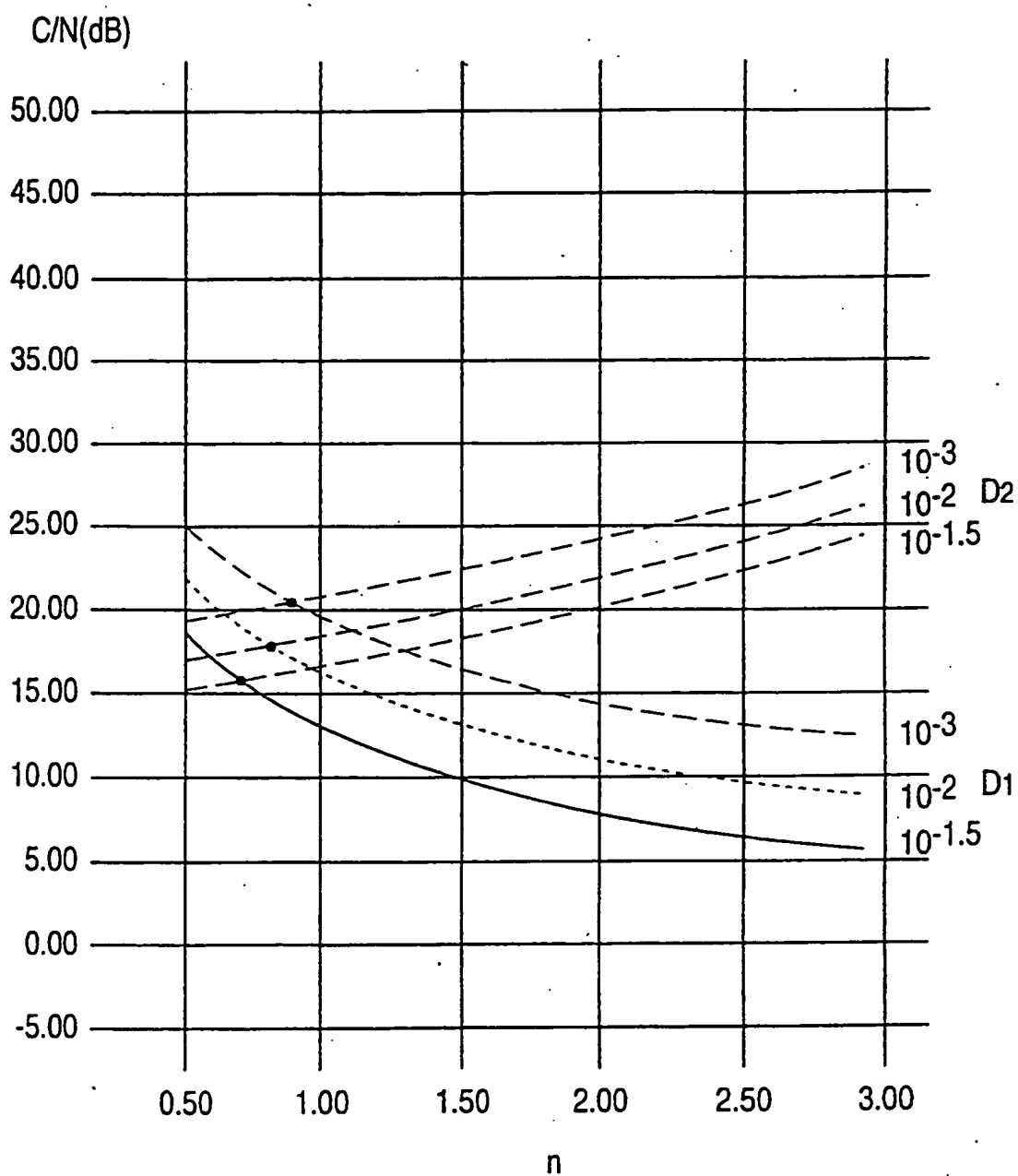


FIG. 104

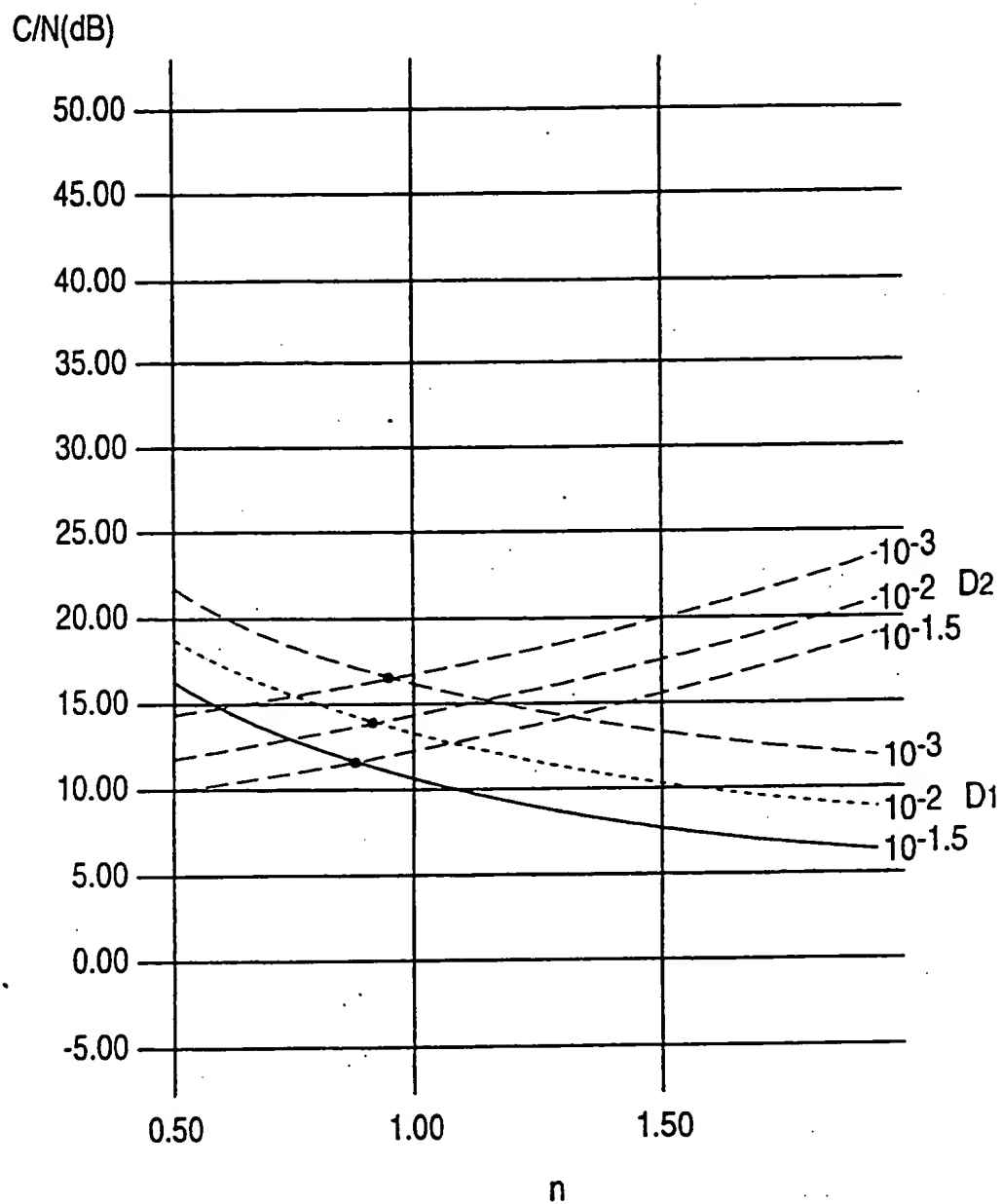


FIG. 105

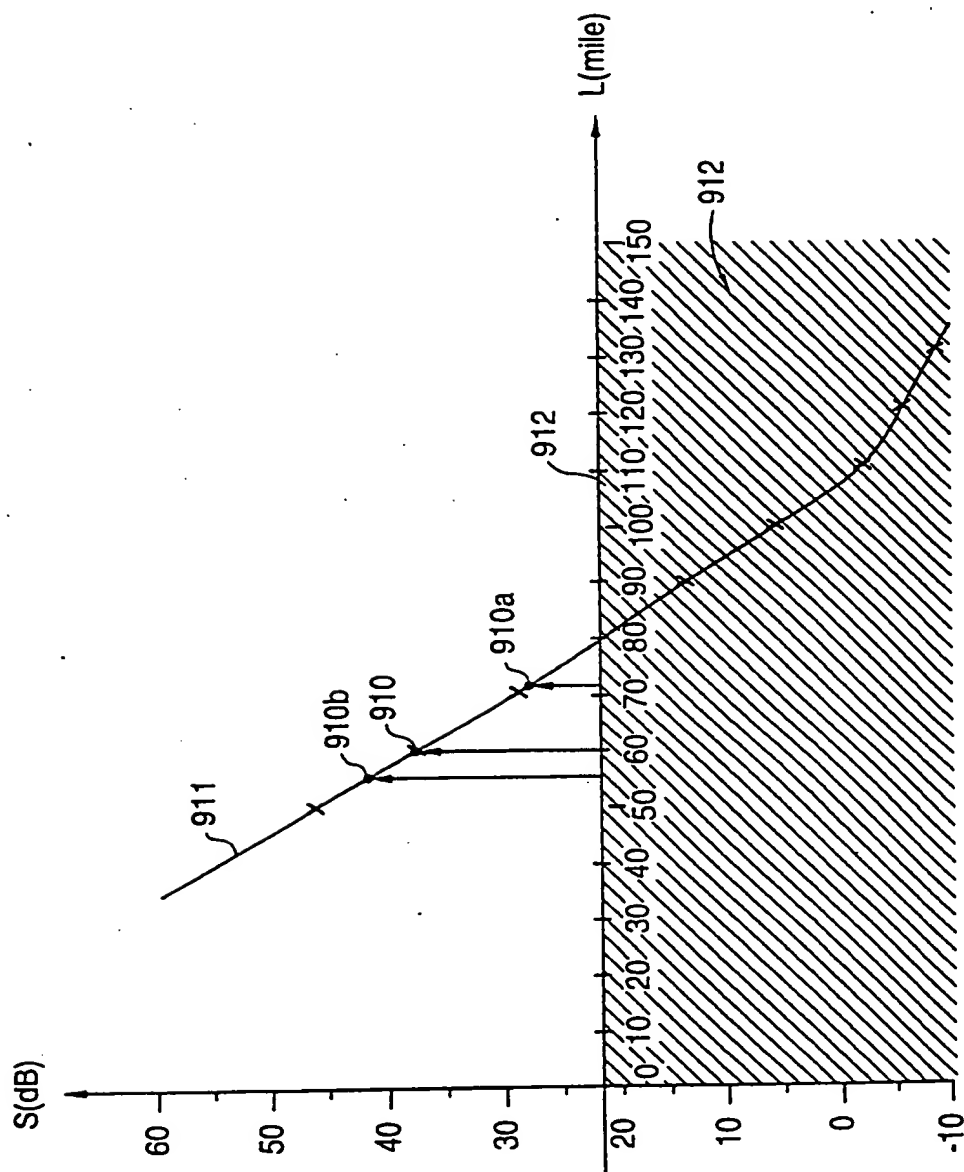


FIG. 106

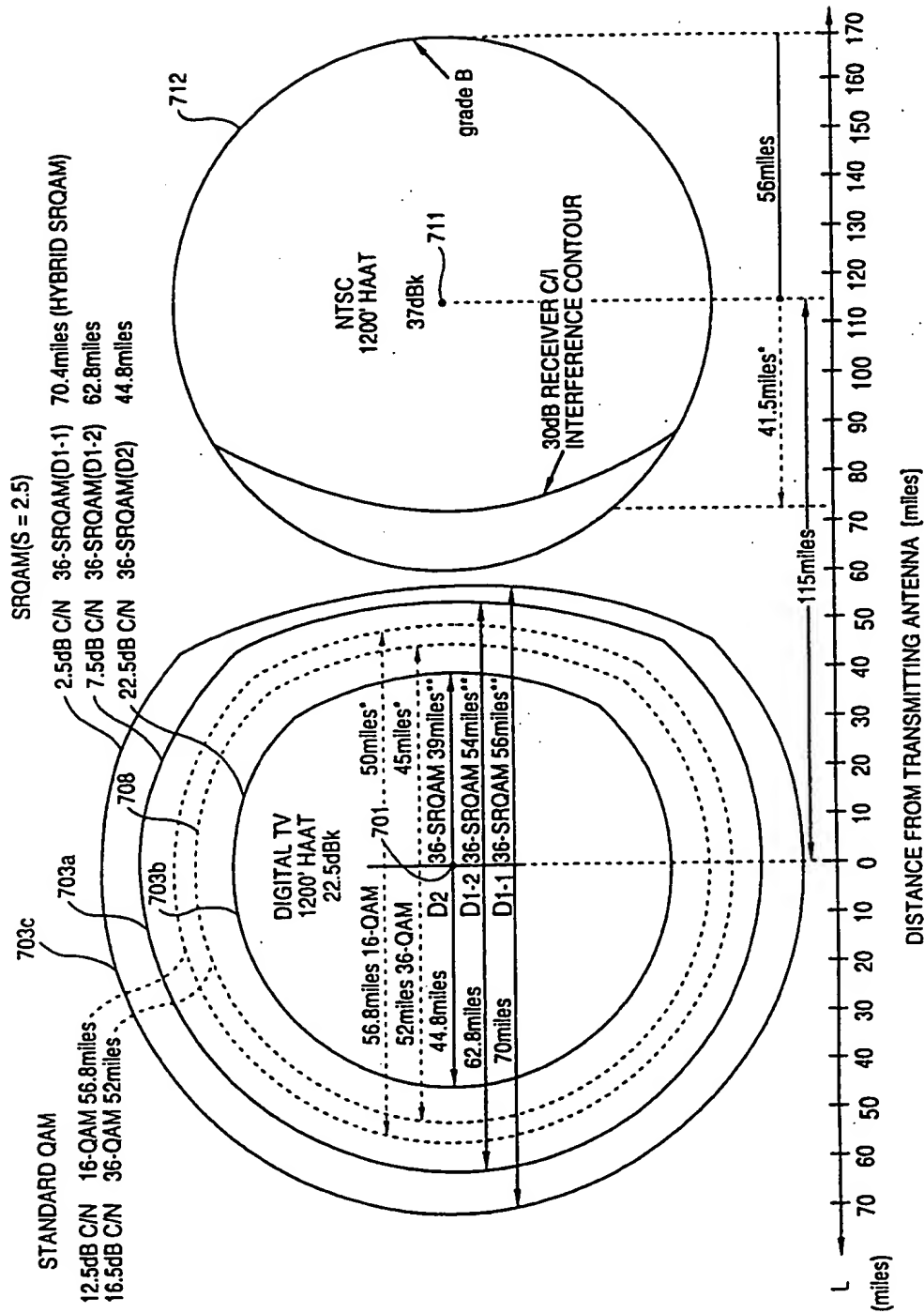


FIG. 107

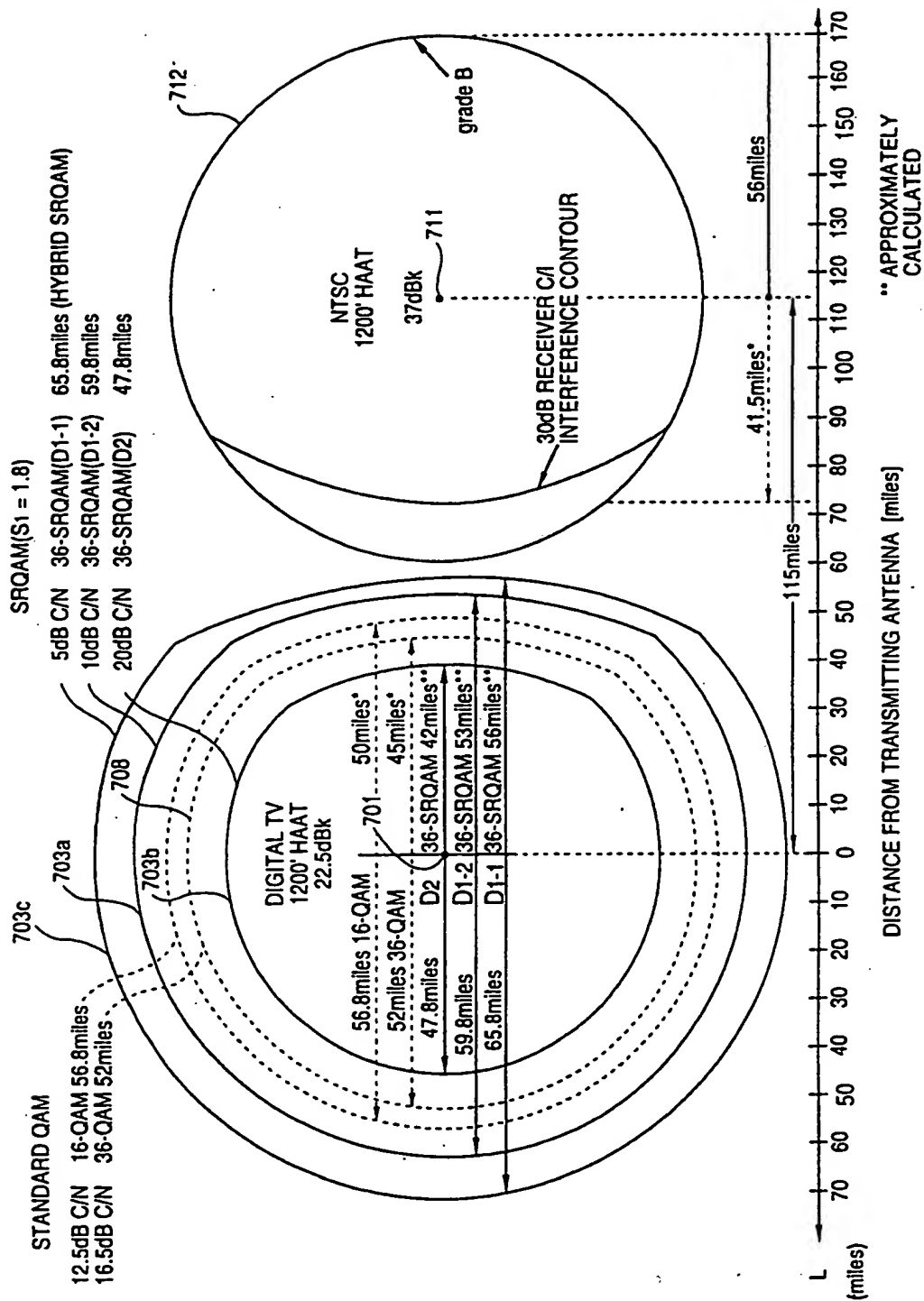


FIG. 108(a)

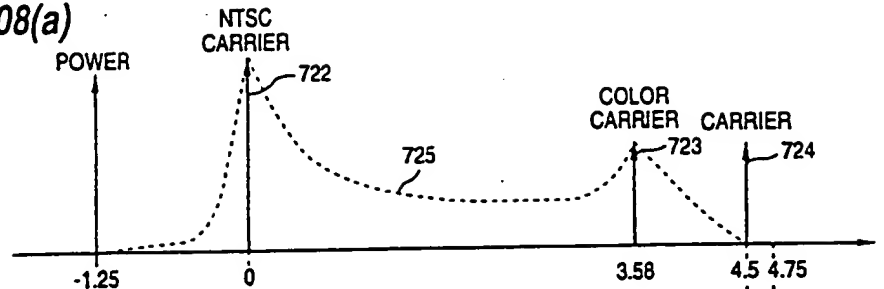


FIG. 108(b)

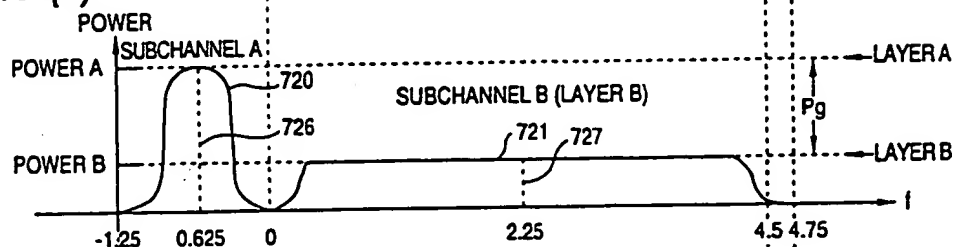


FIG. 108(c)

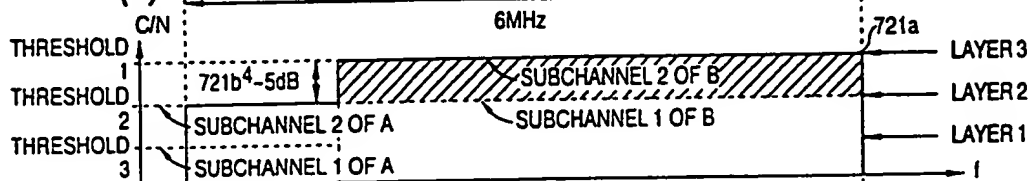


FIG. 108(d)

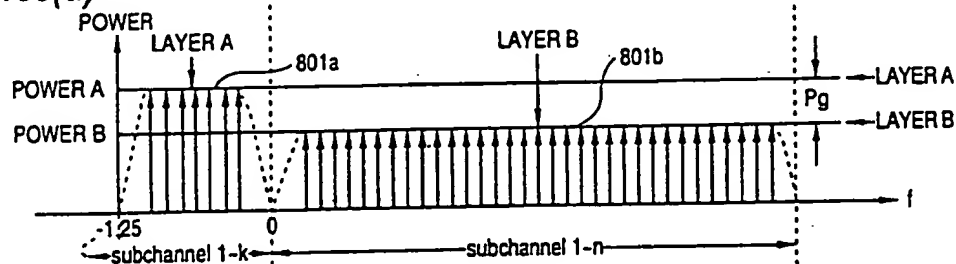


FIG. 108(e)

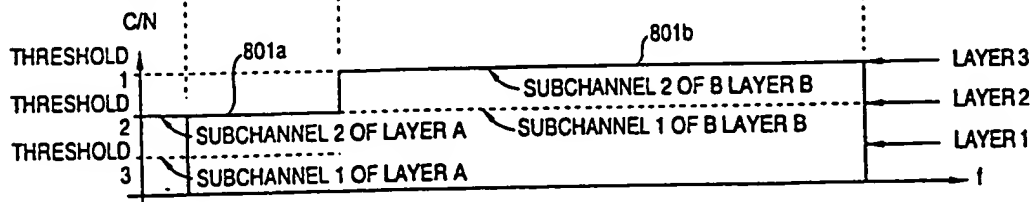


FIG. 109

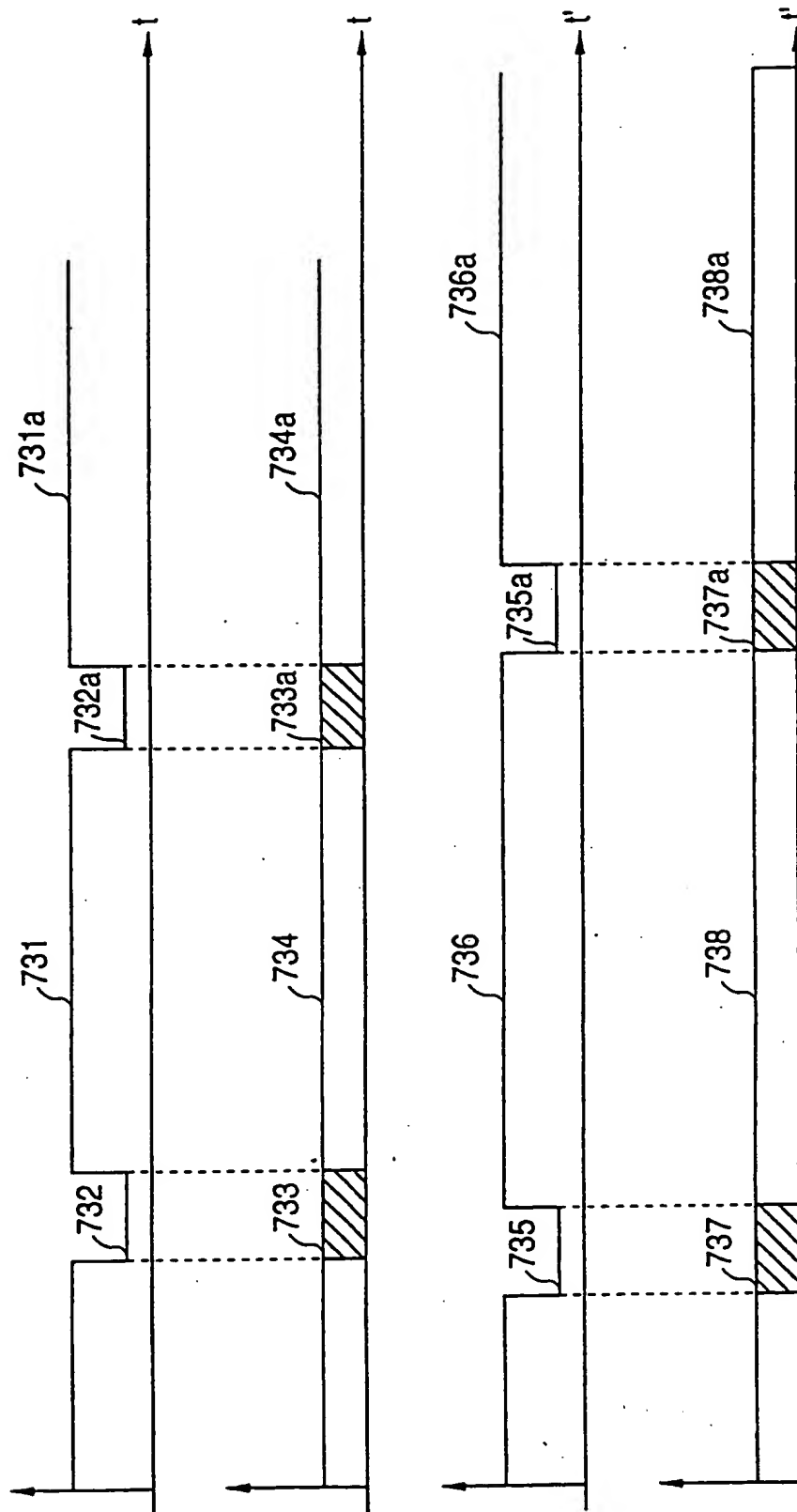


FIG. 110

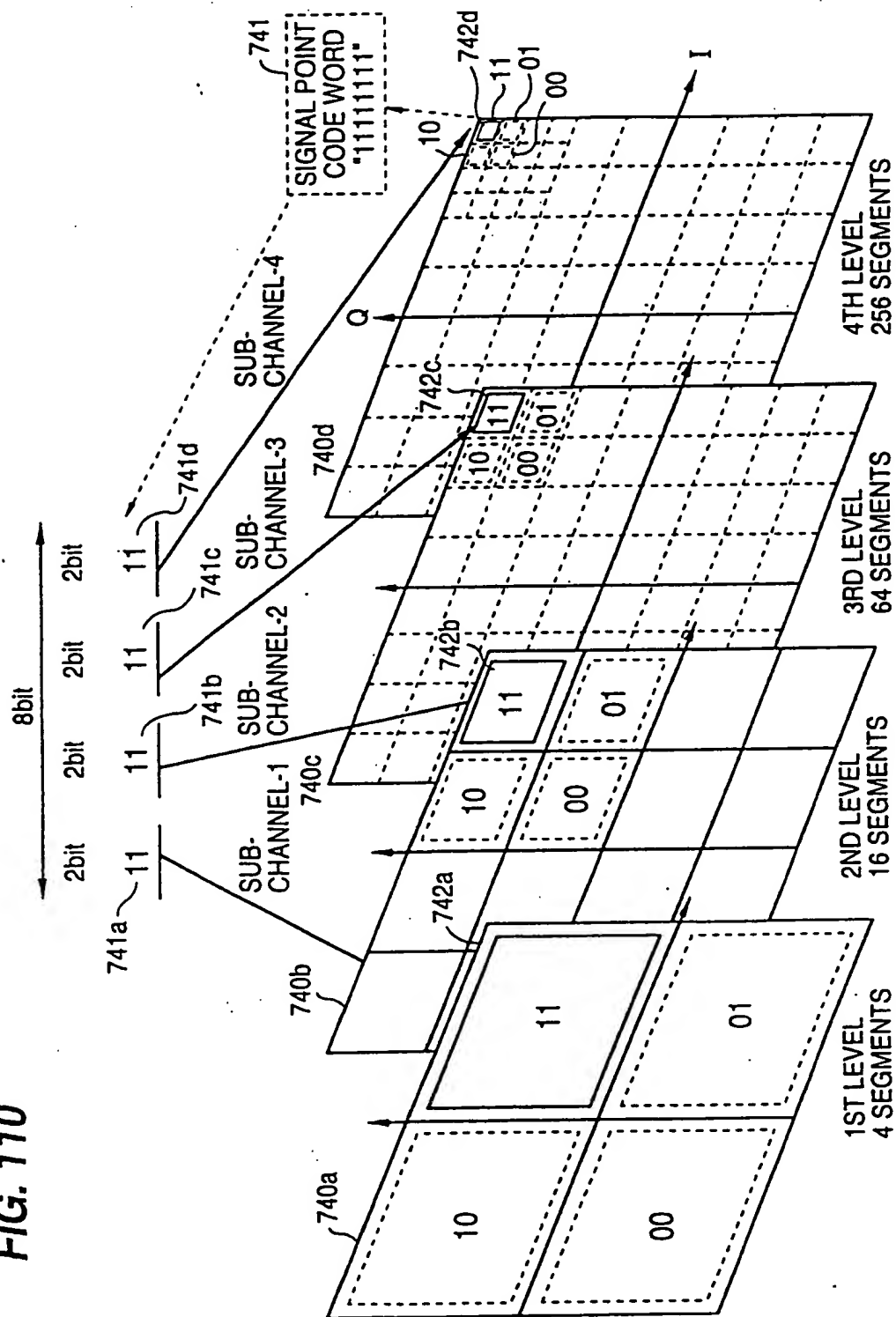
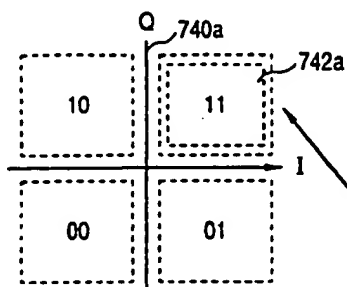


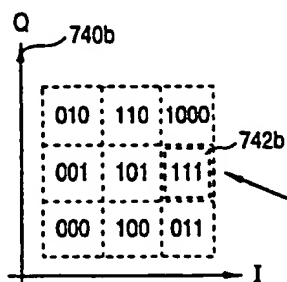
FIG. 111

SUBCHANNEL-1 (SRQAM:D1 = 2bit)



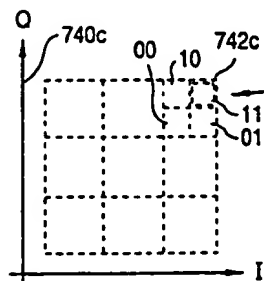
CODE WORD-1

SUBCHANNEL-2 (36-SRQAM:D2 = 3bit + 1/8bit)



CODE WORD-2

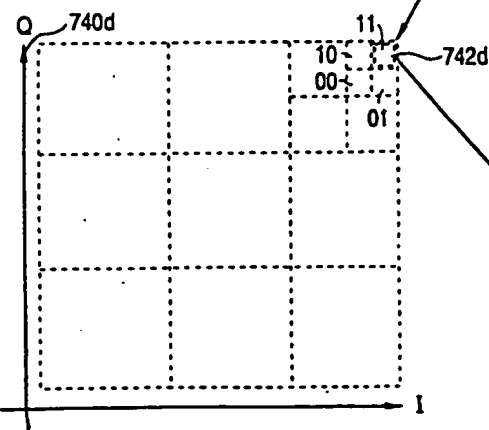
SUBCHANNEL-3 (144-SRQAM:D3 = 2bit)



CODE WORD-3

CODE WORD-4

SUBCHANNEL-4 (576-SRQAM:D4 = 2bit)



SIGNAL POINT
CODE WORD
11 11 11 11

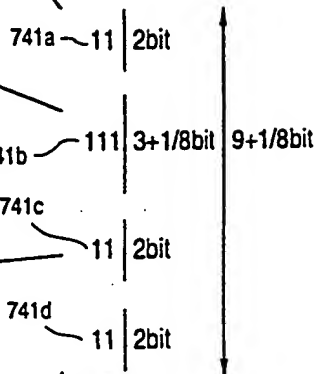
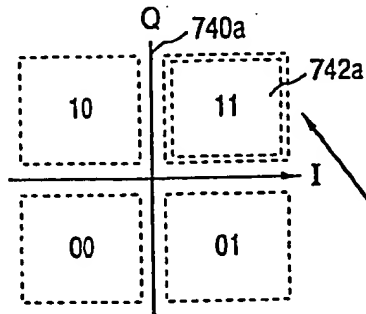
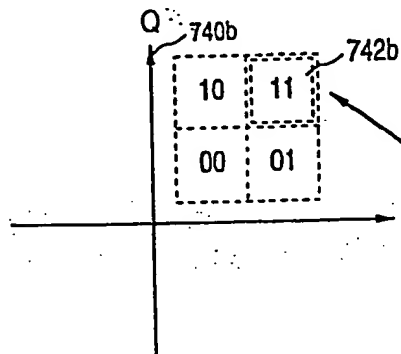


FIG. 112 (Amended)

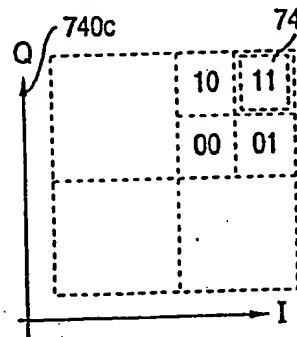
SUBCHANNEL-1 (SRQAM:D1 = 2bit)



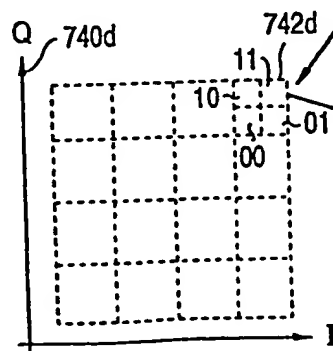
SUBCHANNEL-2 (16-SRQAM:D2 = 2bit)



SUBCHANNEL-3 (64-SRQAM:D3 = 2bit)



SUBCHANNEL-4 (256-SRQAM:D4 = 2bit)

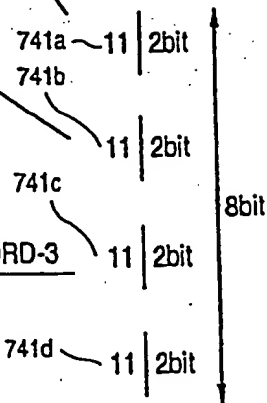


CODE WORD-1

CODE WORD-2

CODE WORD-3

CODE WORD-4



SIGNAL POINT
CODE WORD
11 11 11 11

FIG. 113

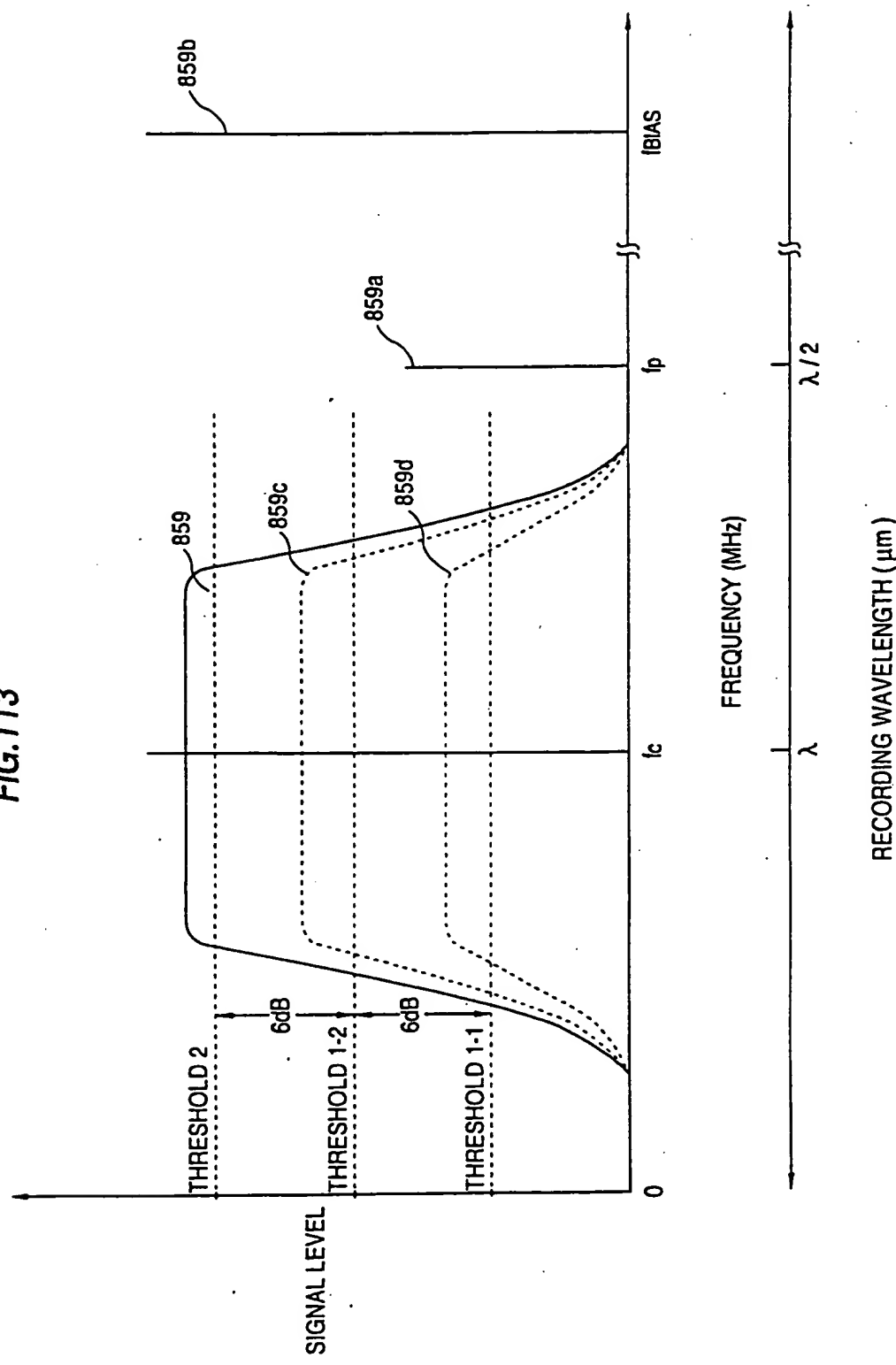


FIG. 114

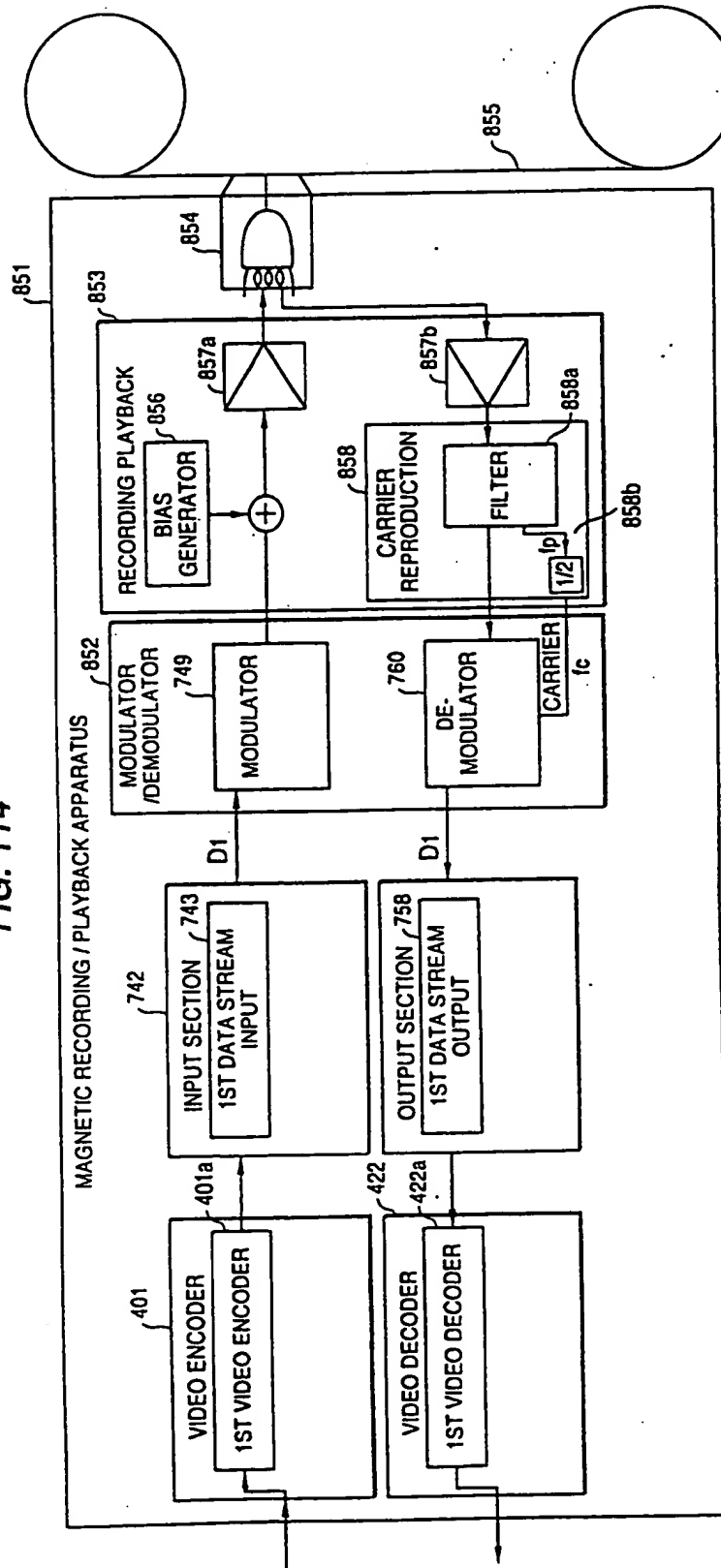


FIG. 115

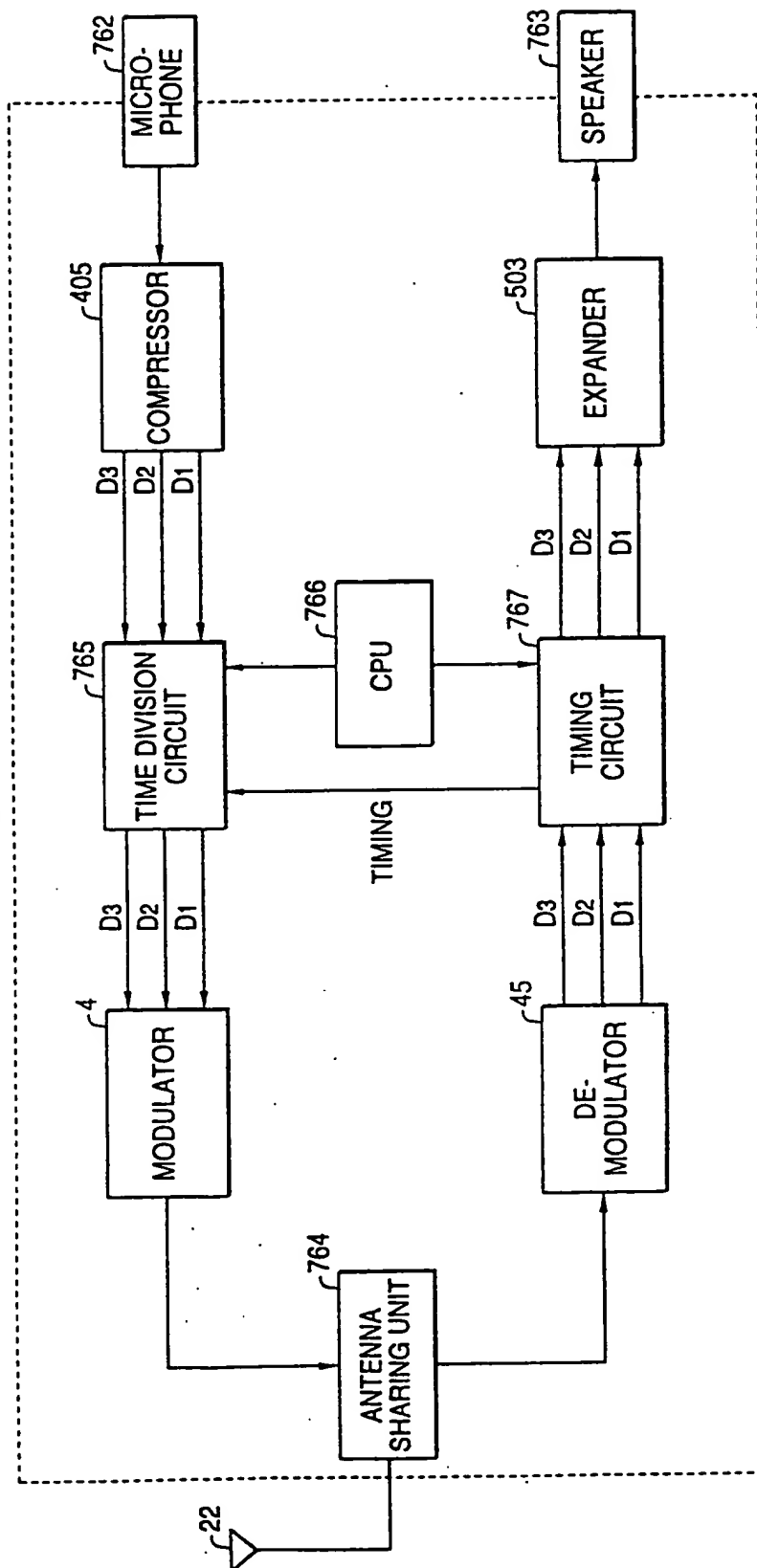


FIG. 116

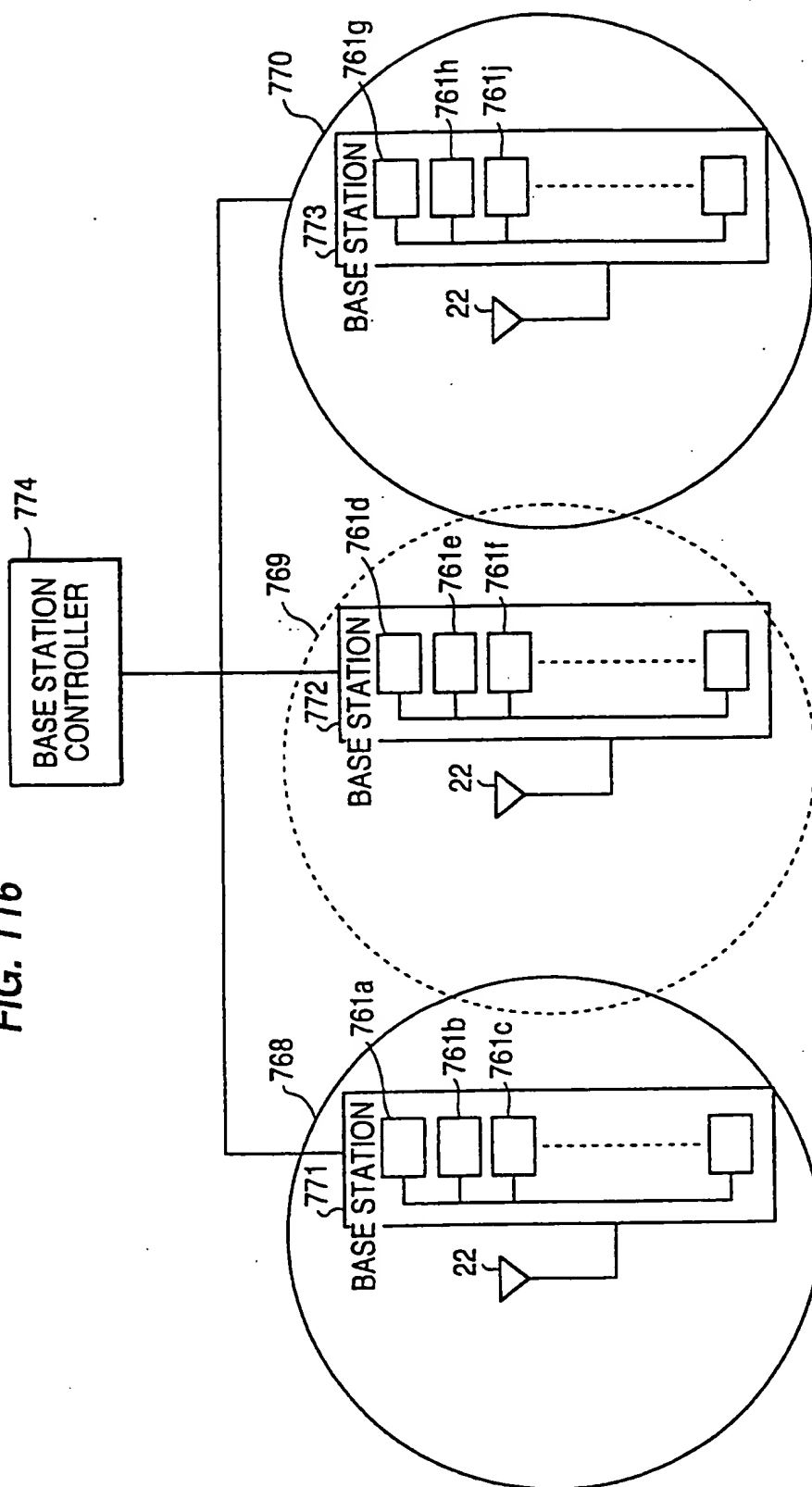


FIG. 117

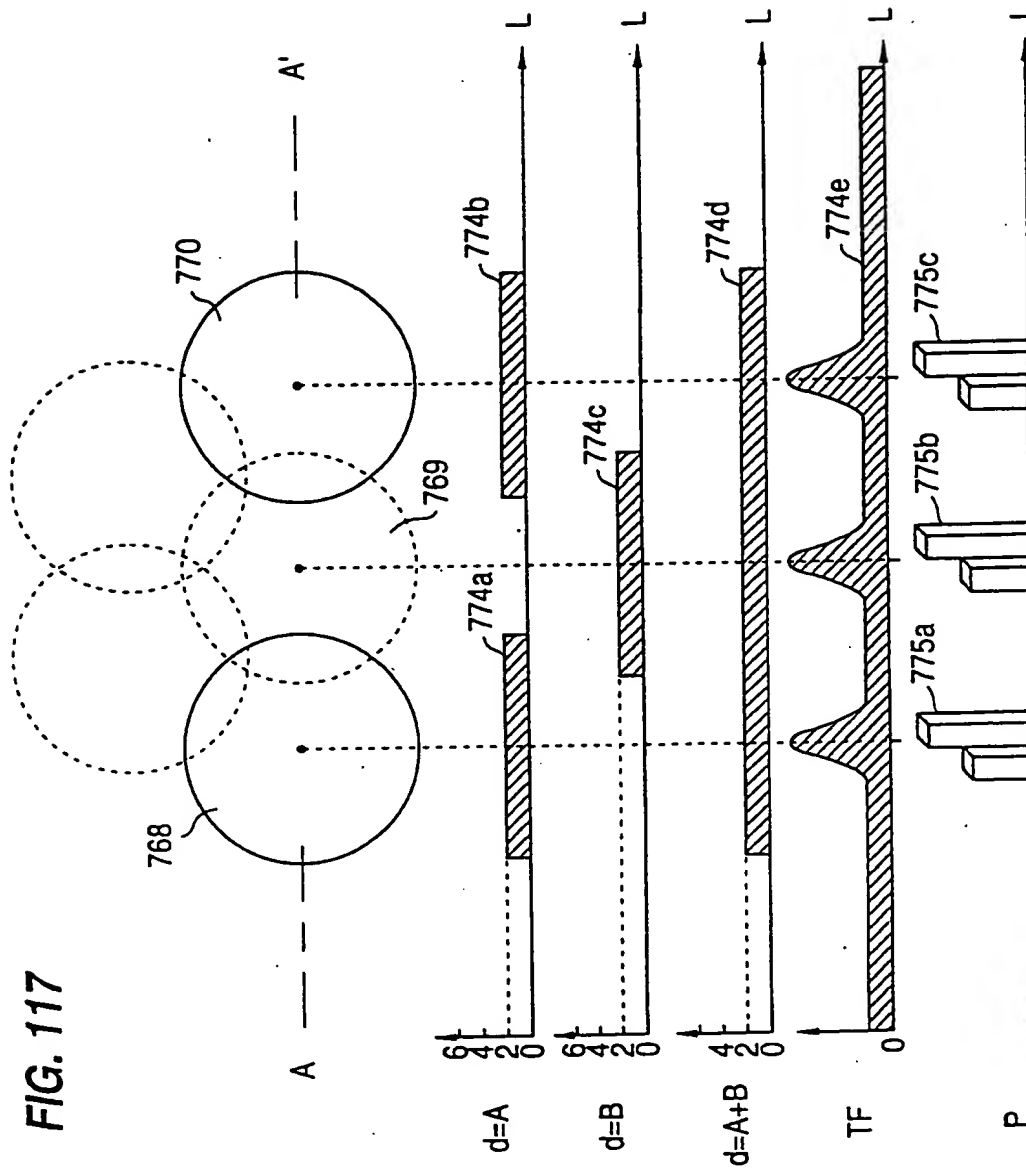


FIG. 118

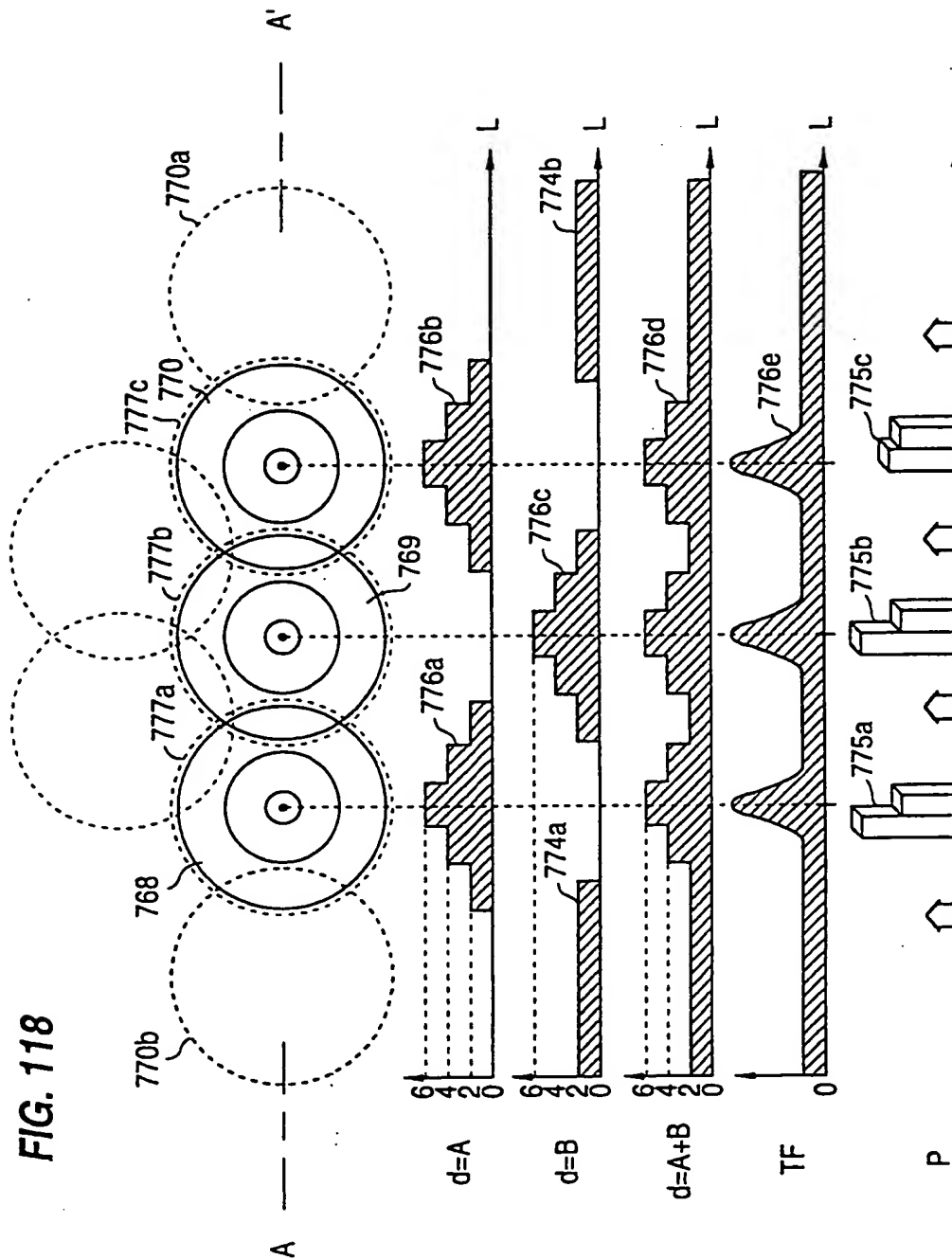


FIG. 119(a)

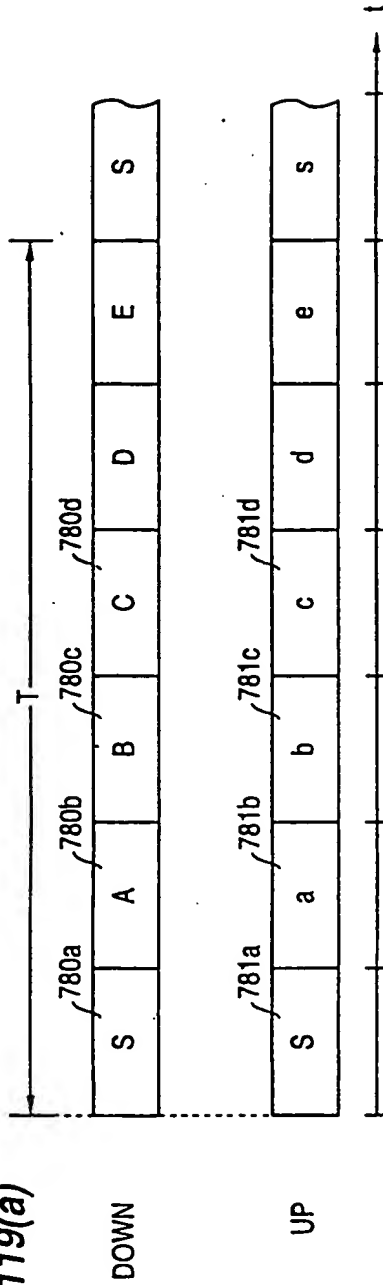


FIG. 119(b)

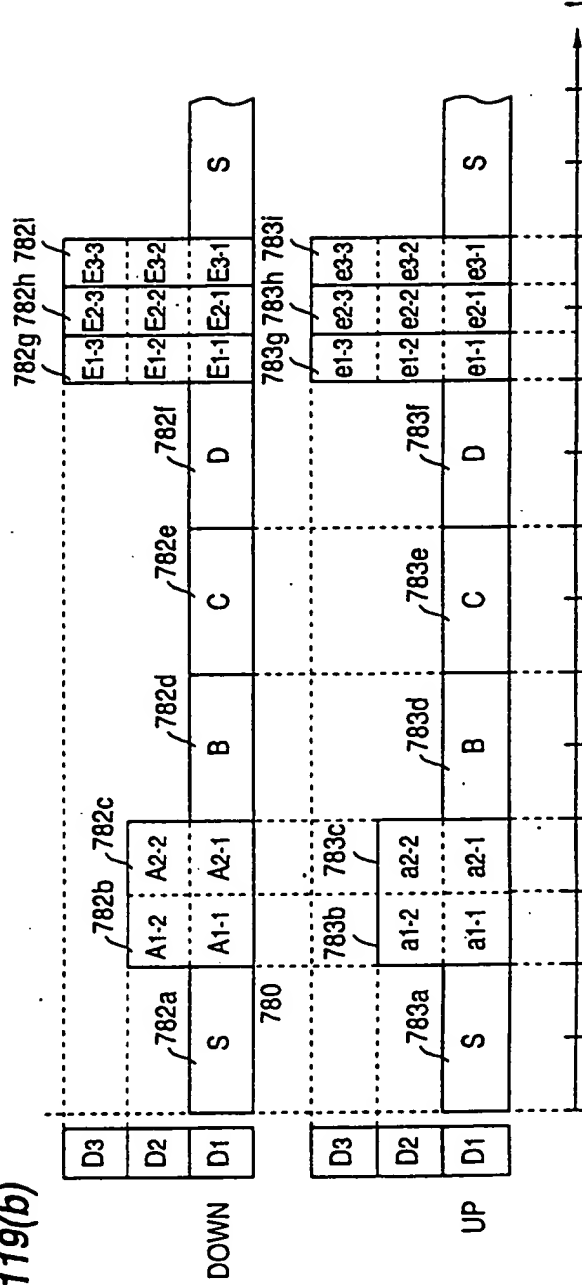


FIG. 120(a)

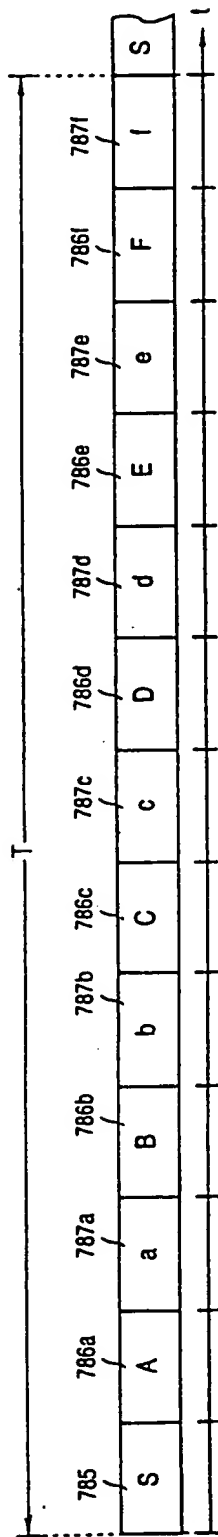


FIG. 120(b)

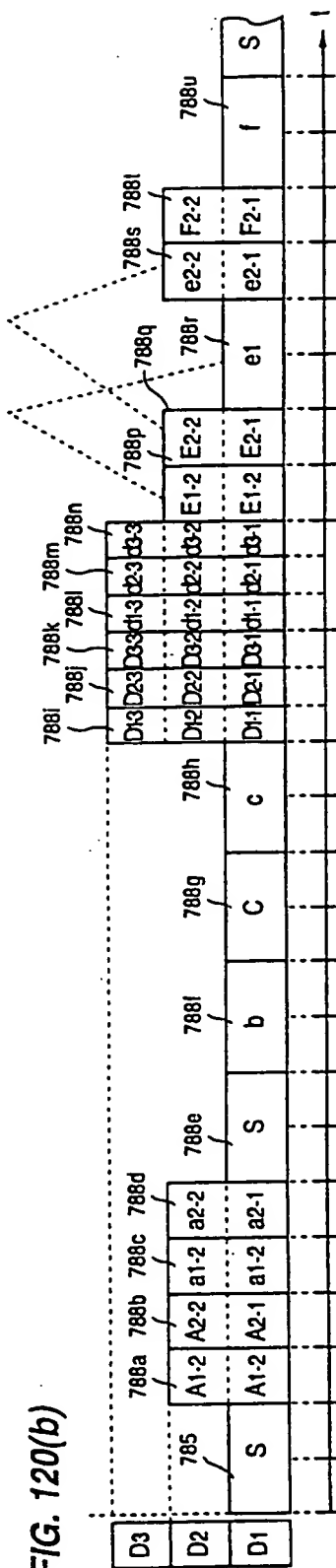


FIG. 121

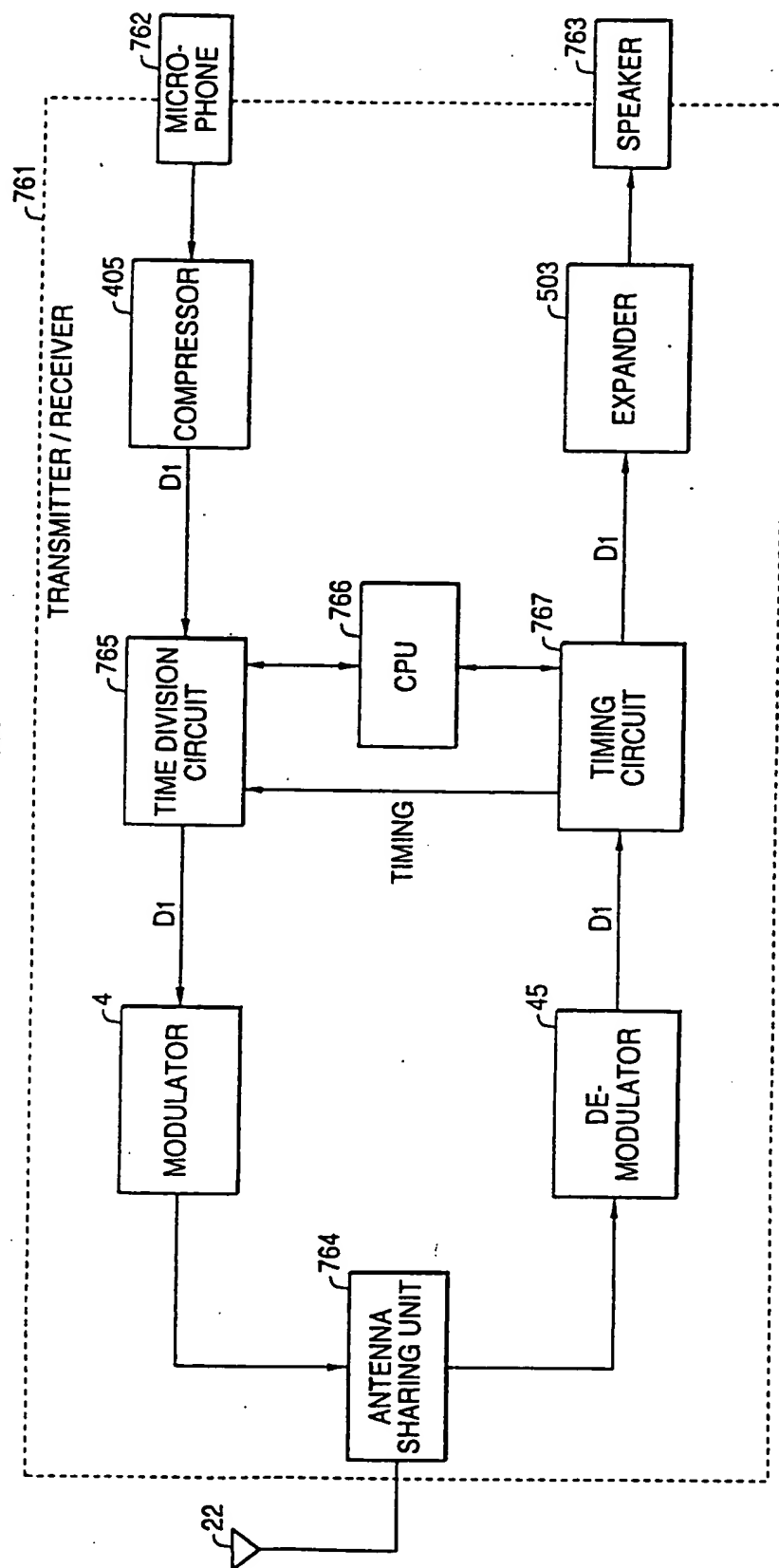


FIG. 122

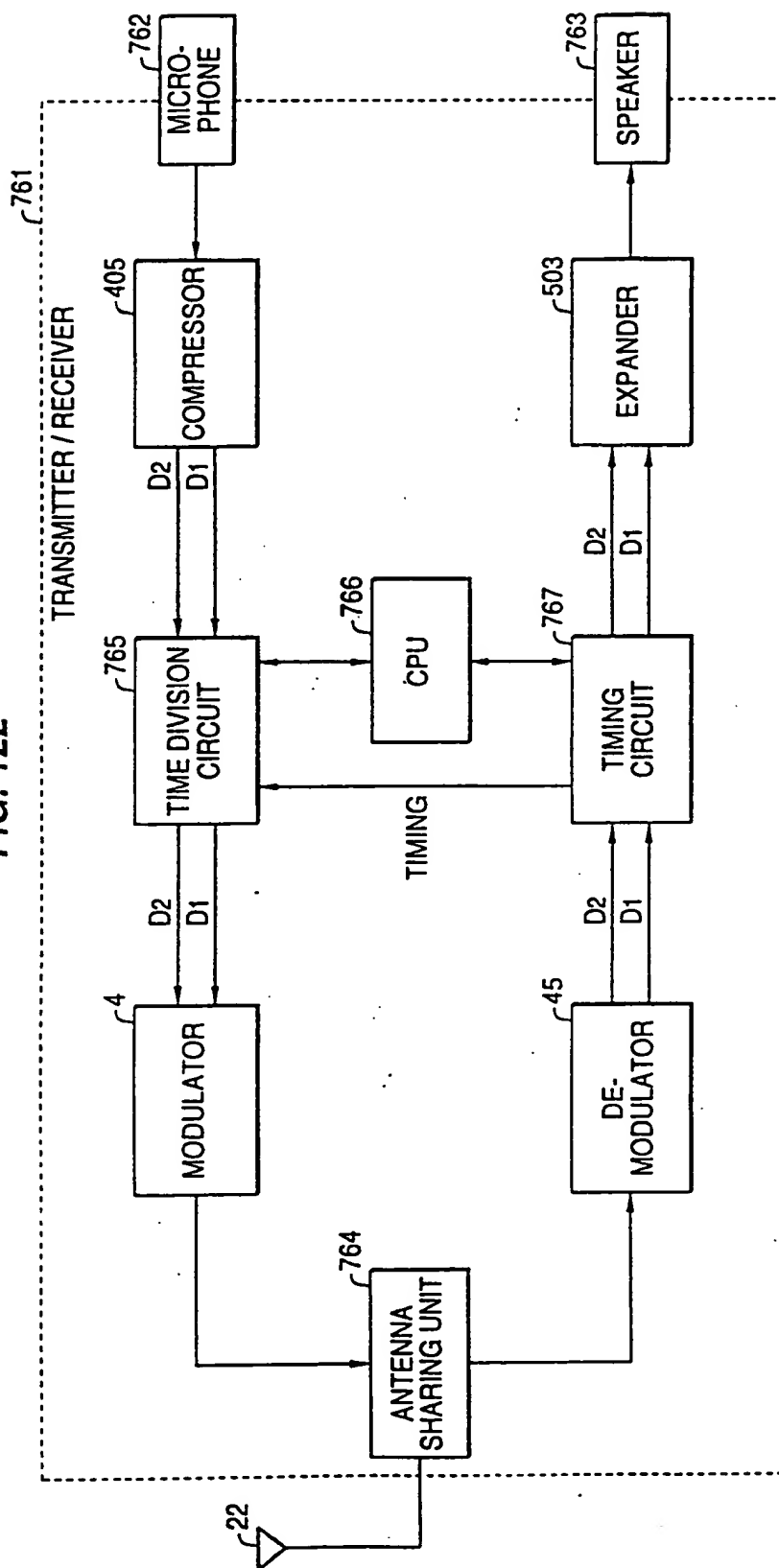
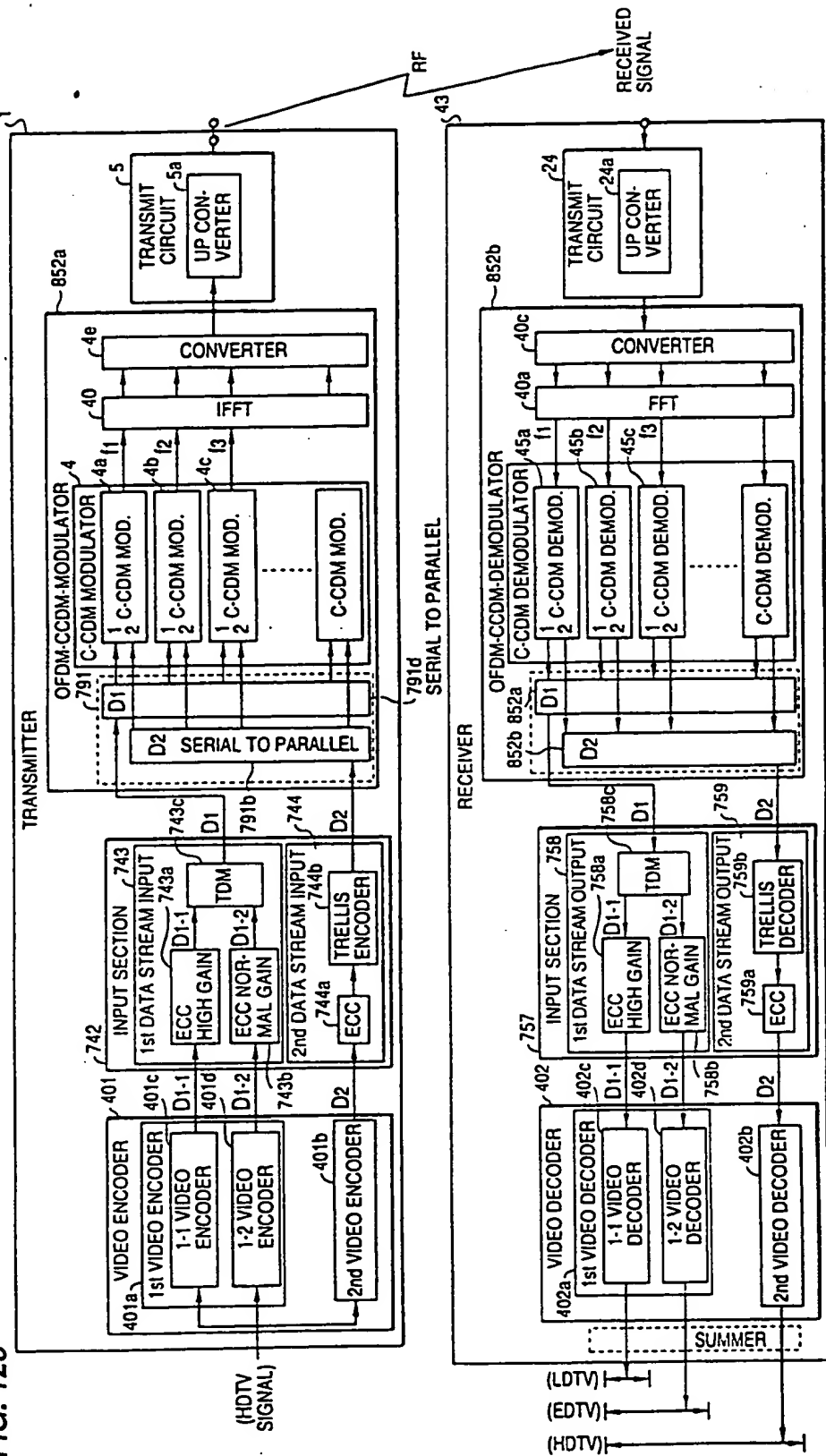
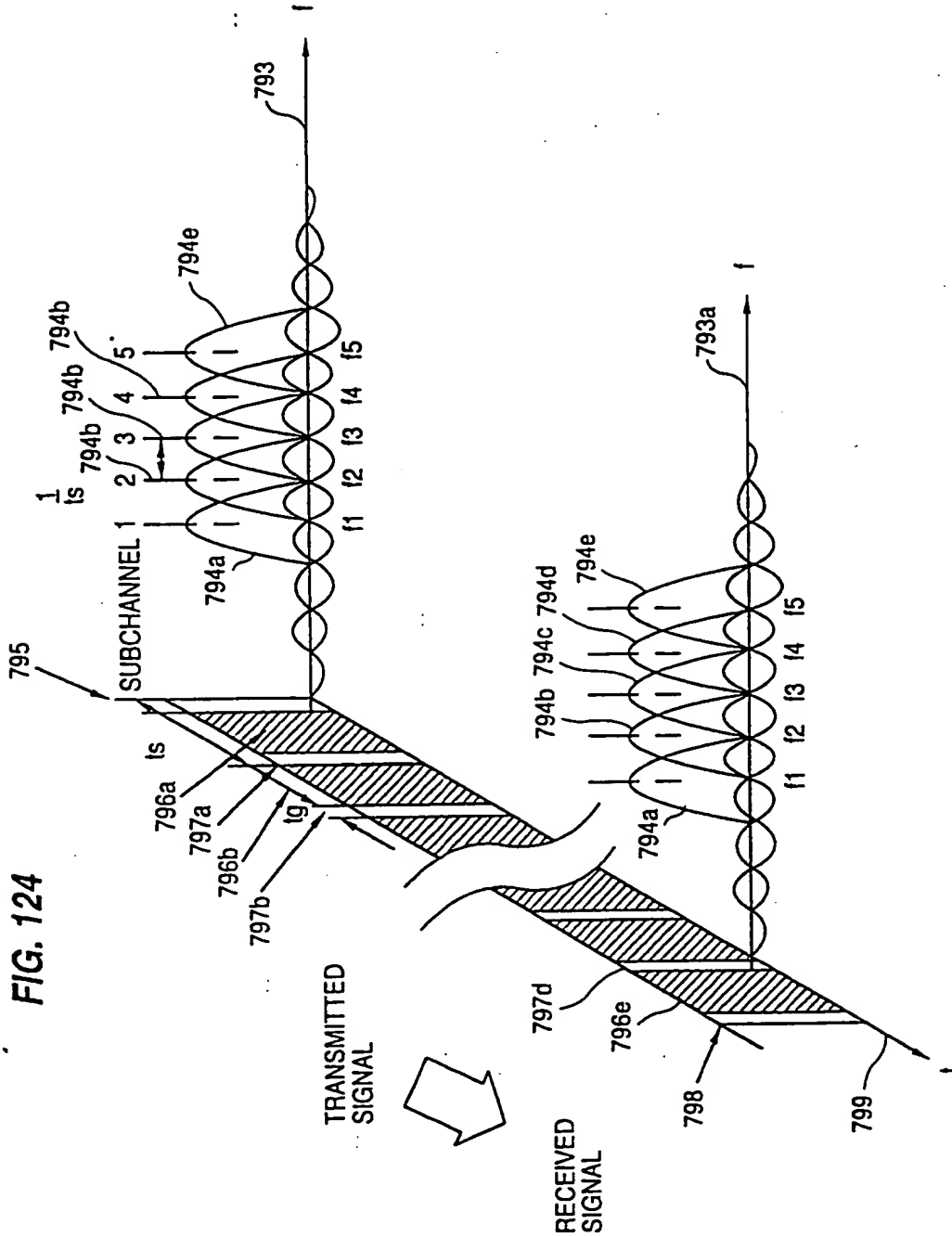
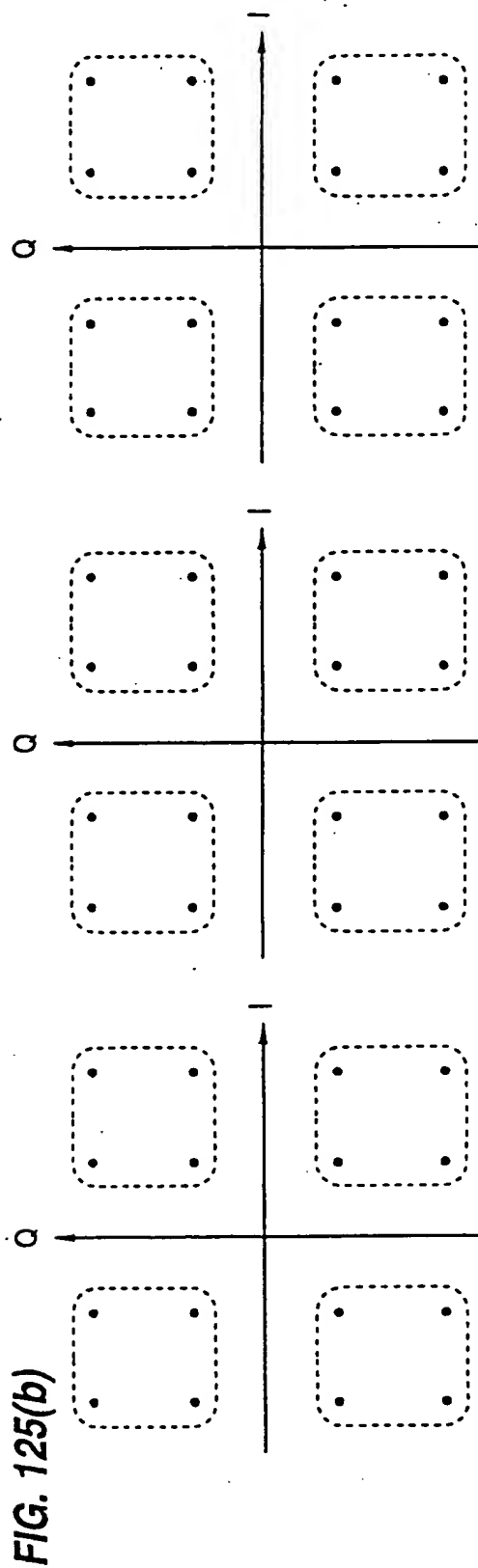
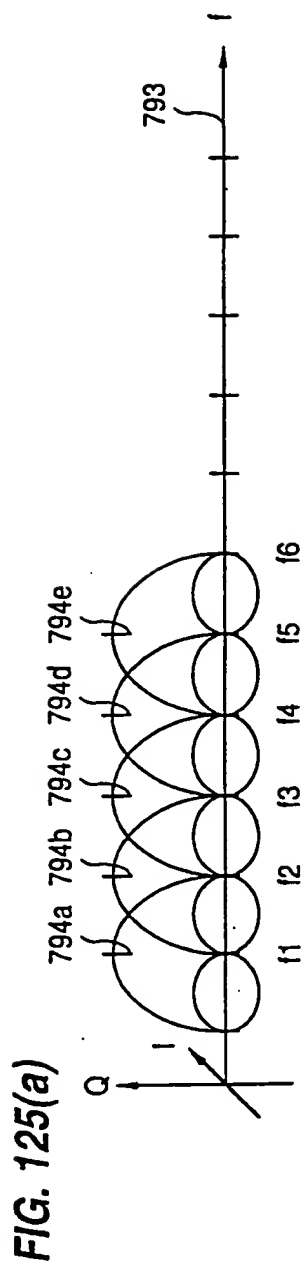


FIG. 123







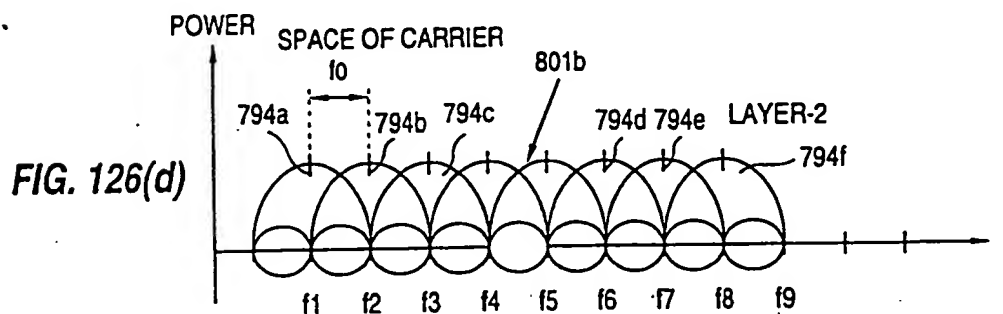
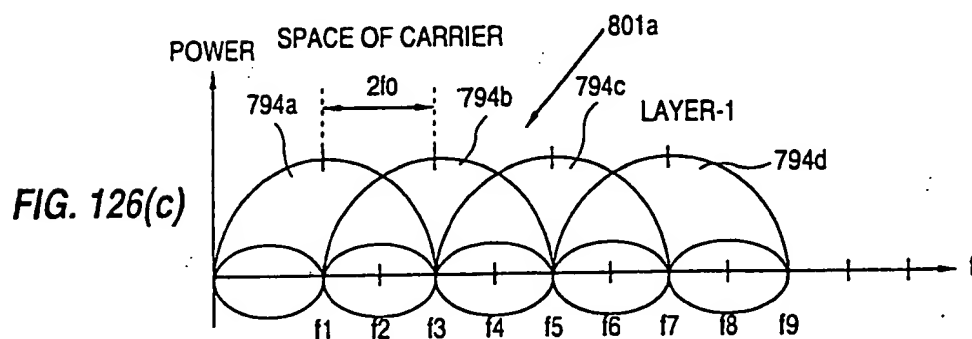
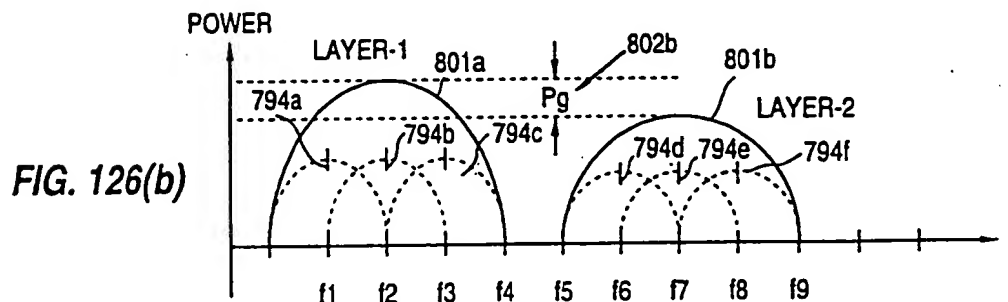
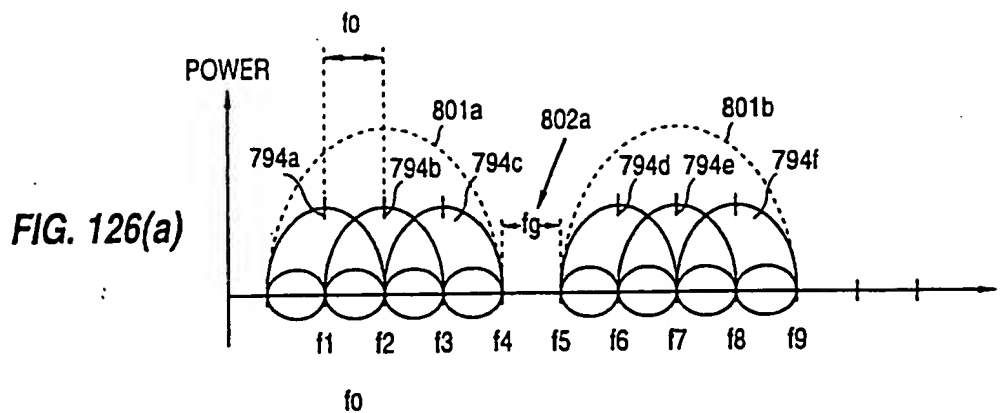


FIG. 127

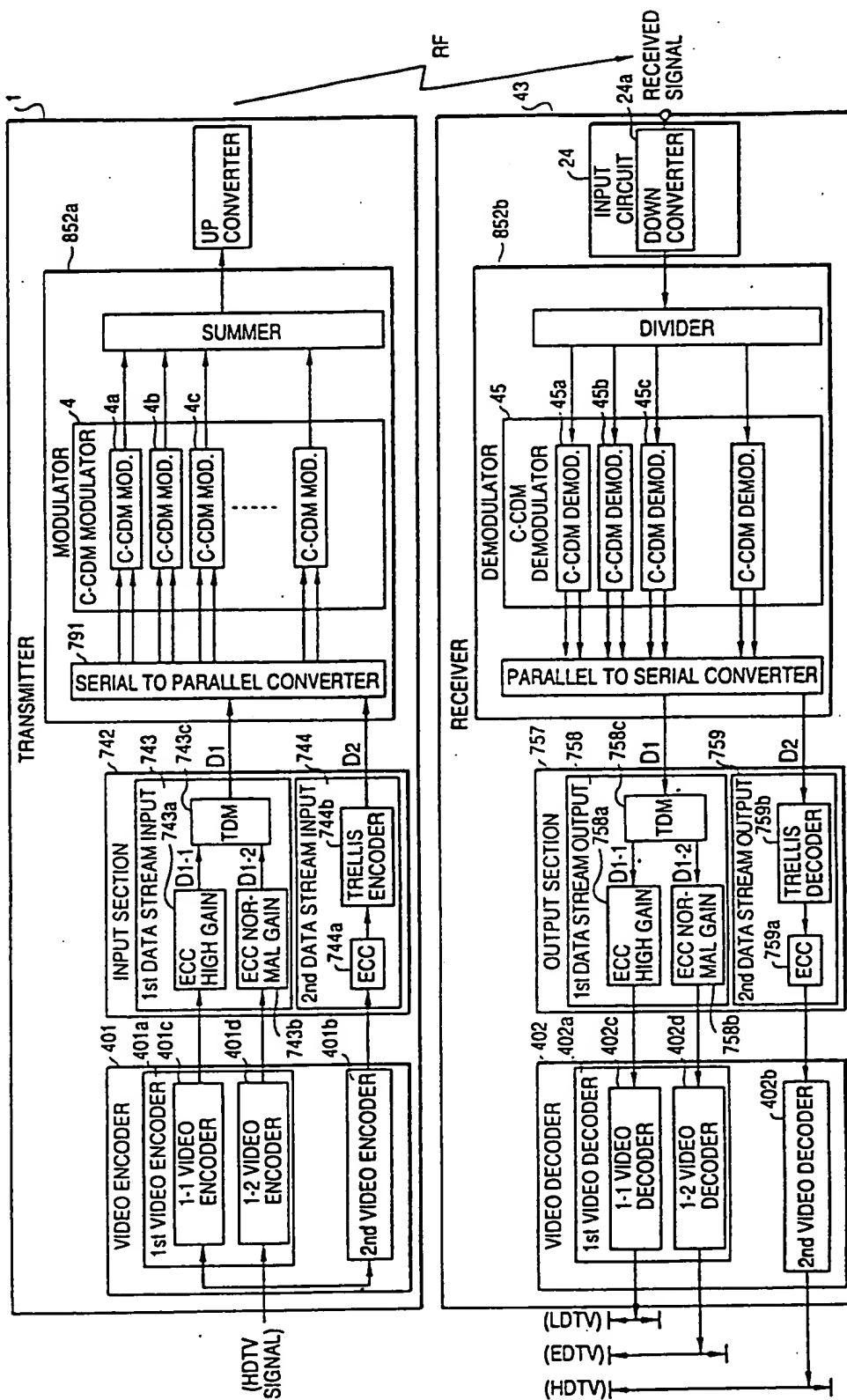


FIG. 128(a)

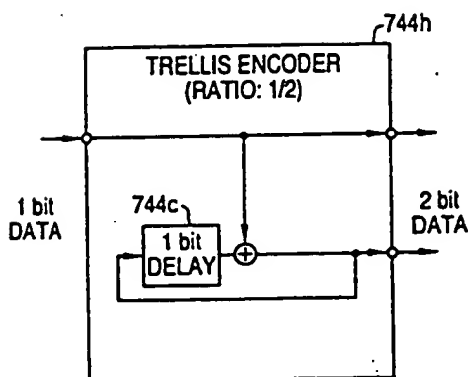


FIG. 128(d)

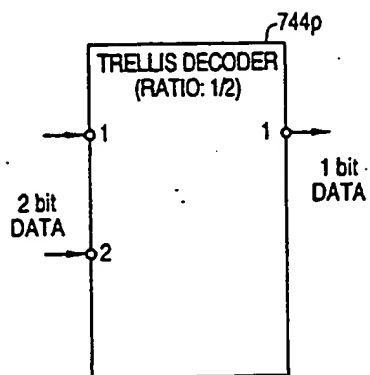


FIG. 128(b)

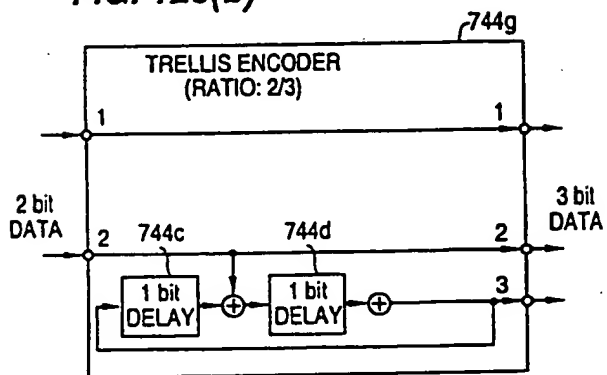


FIG. 128(e)

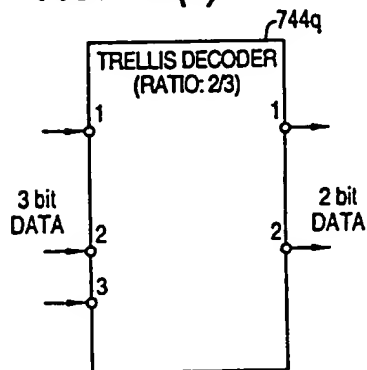


FIG. 128(c)

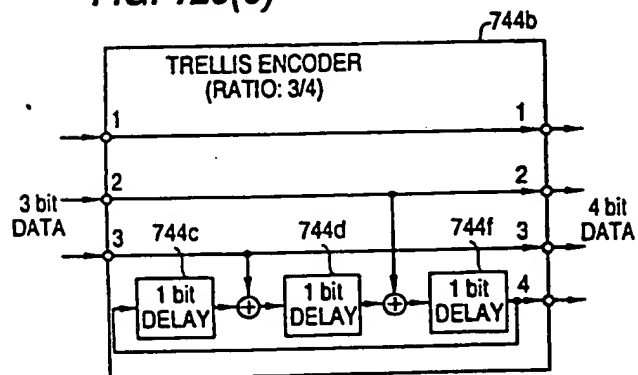


FIG. 128(f)

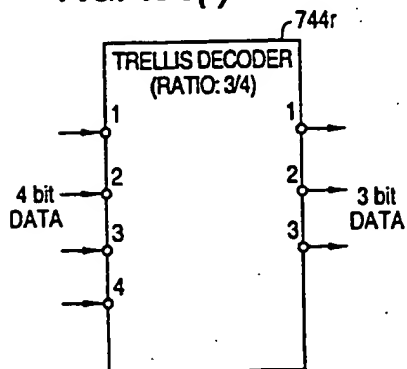


FIG. 129

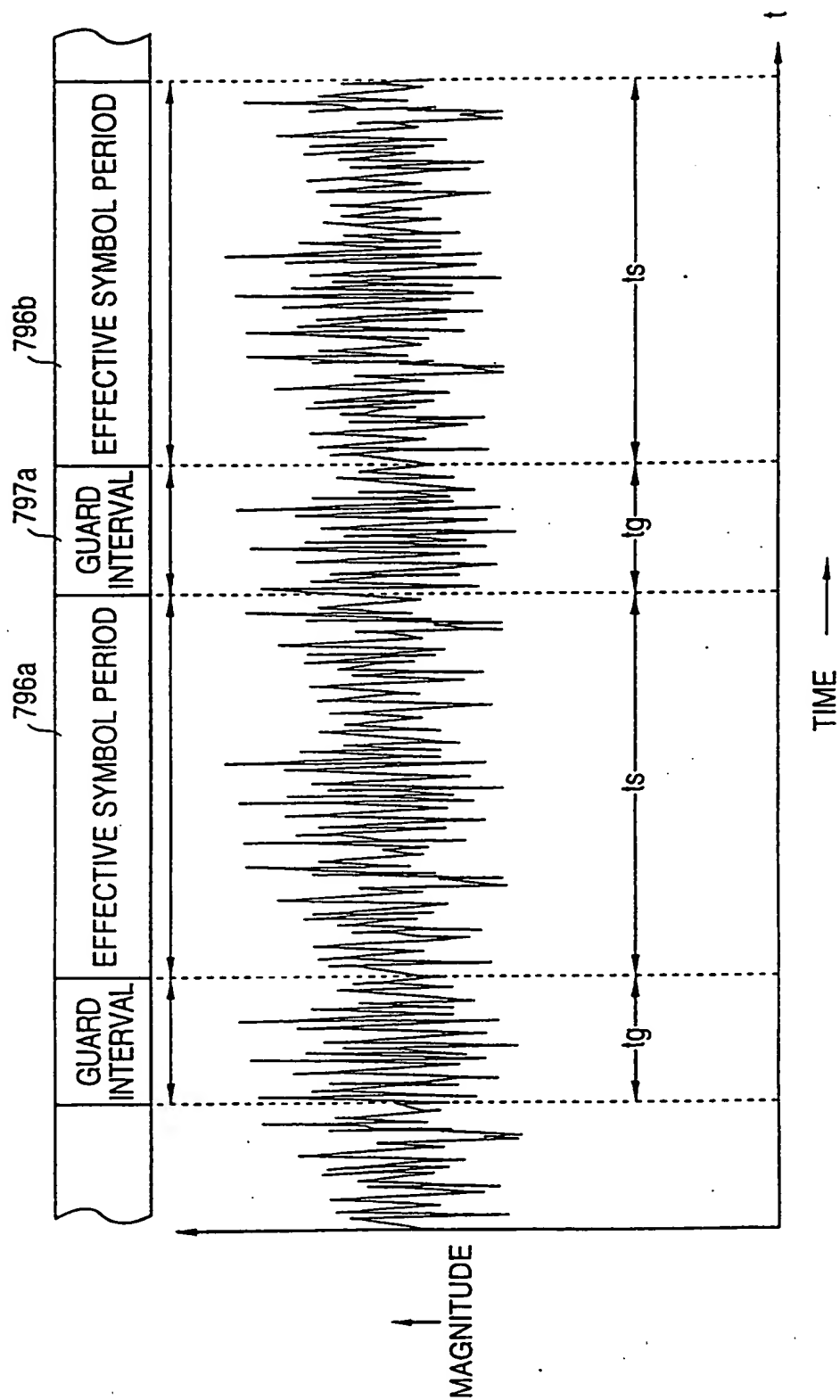


FIG. 130

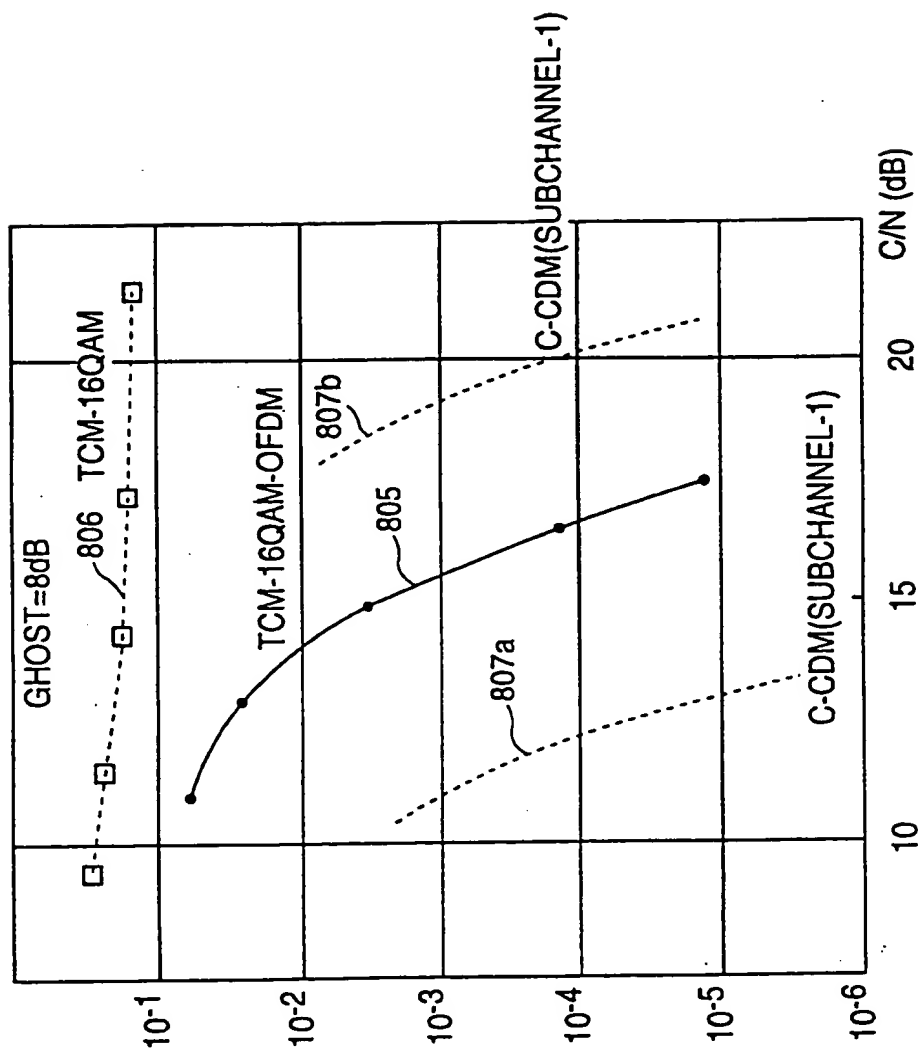
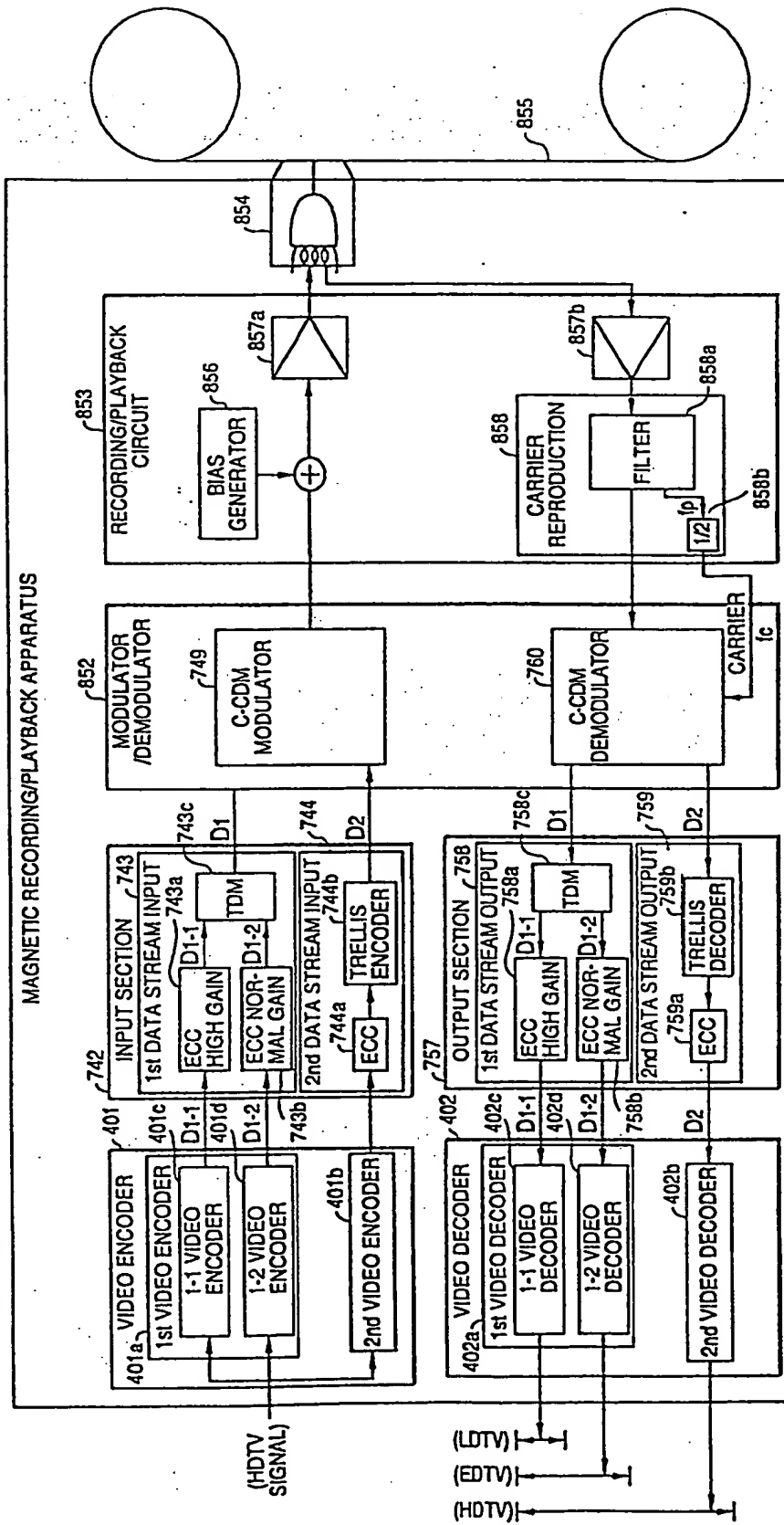


FIG. 131 (Amended)



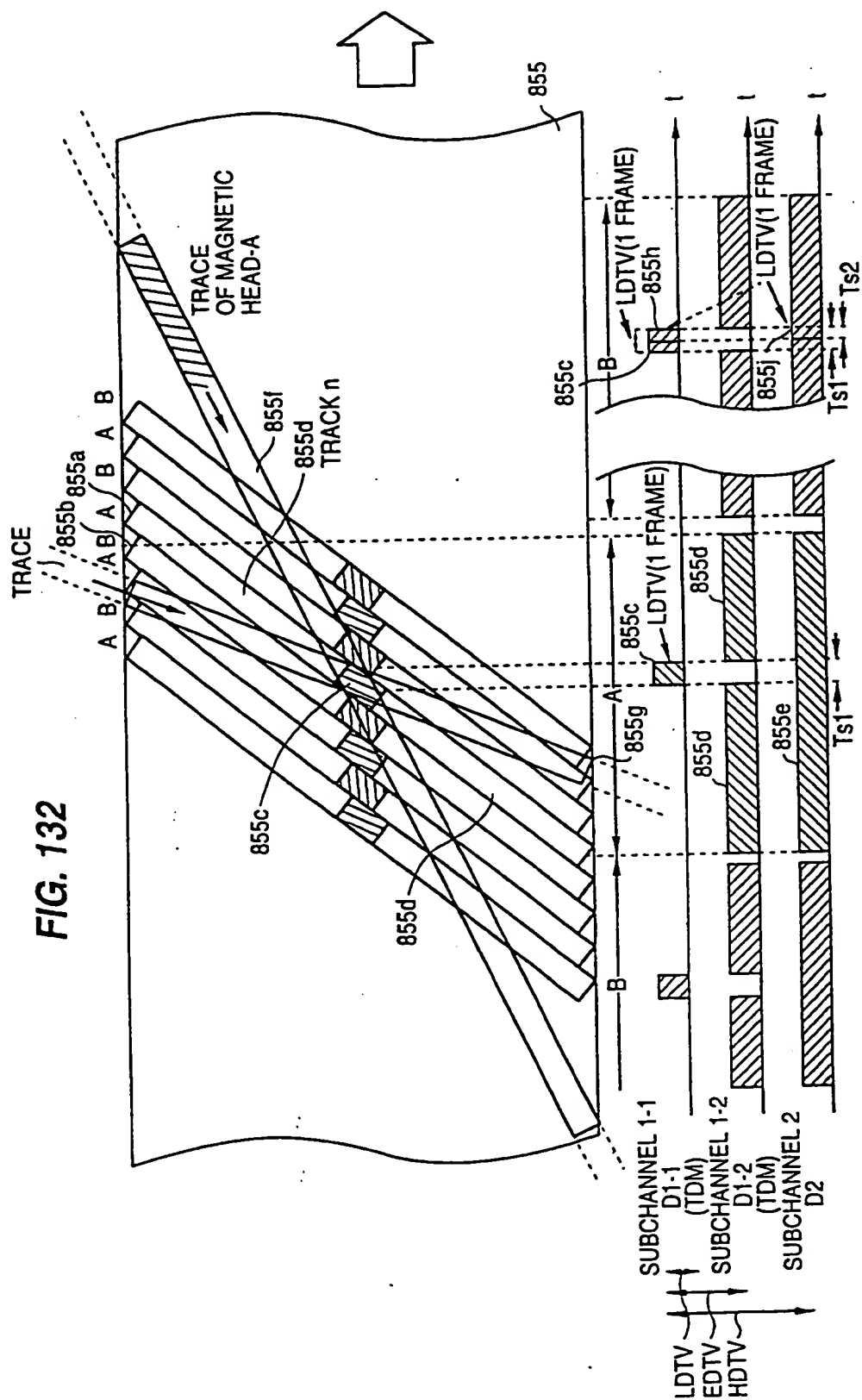


FIG. 133

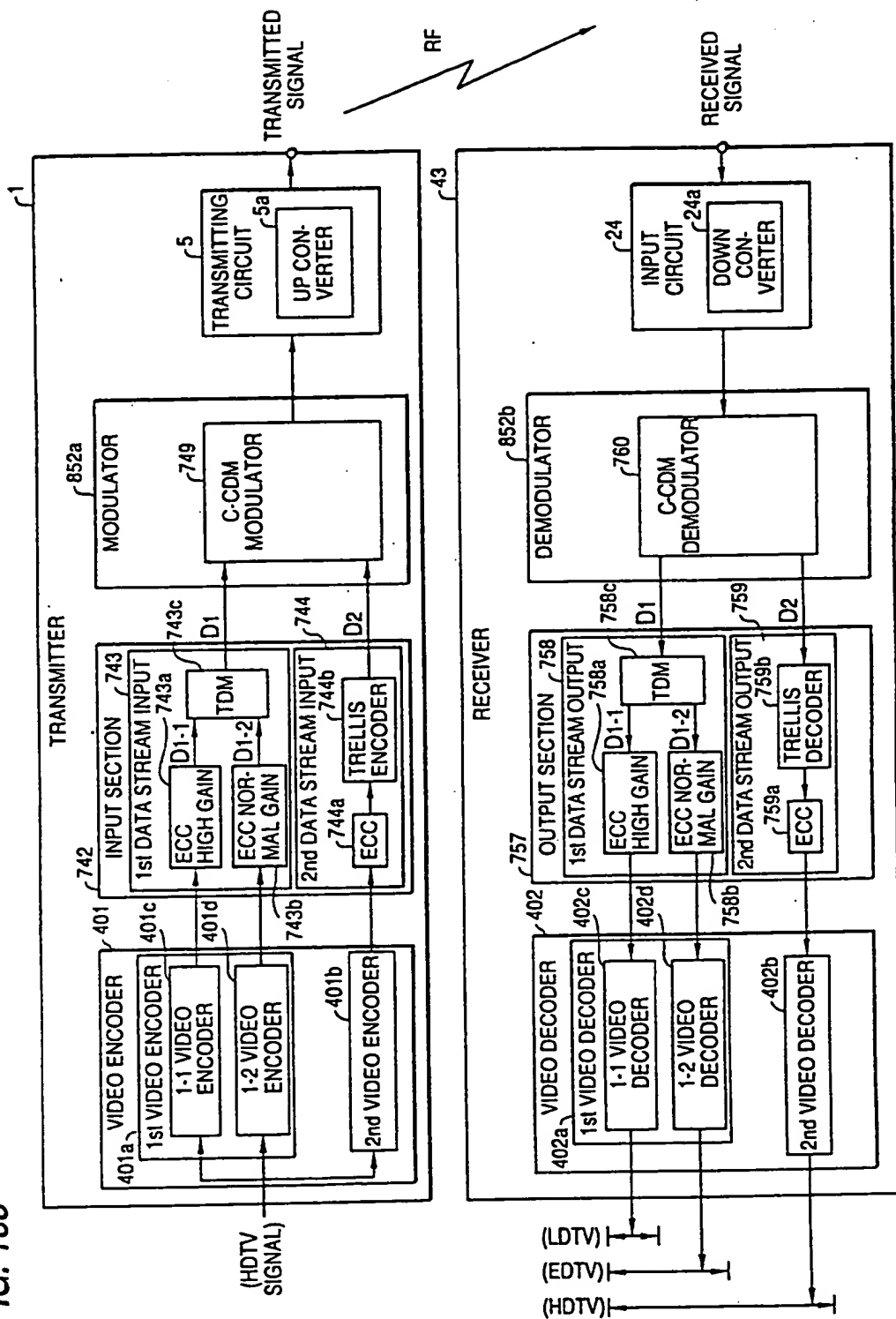


FIG. 134

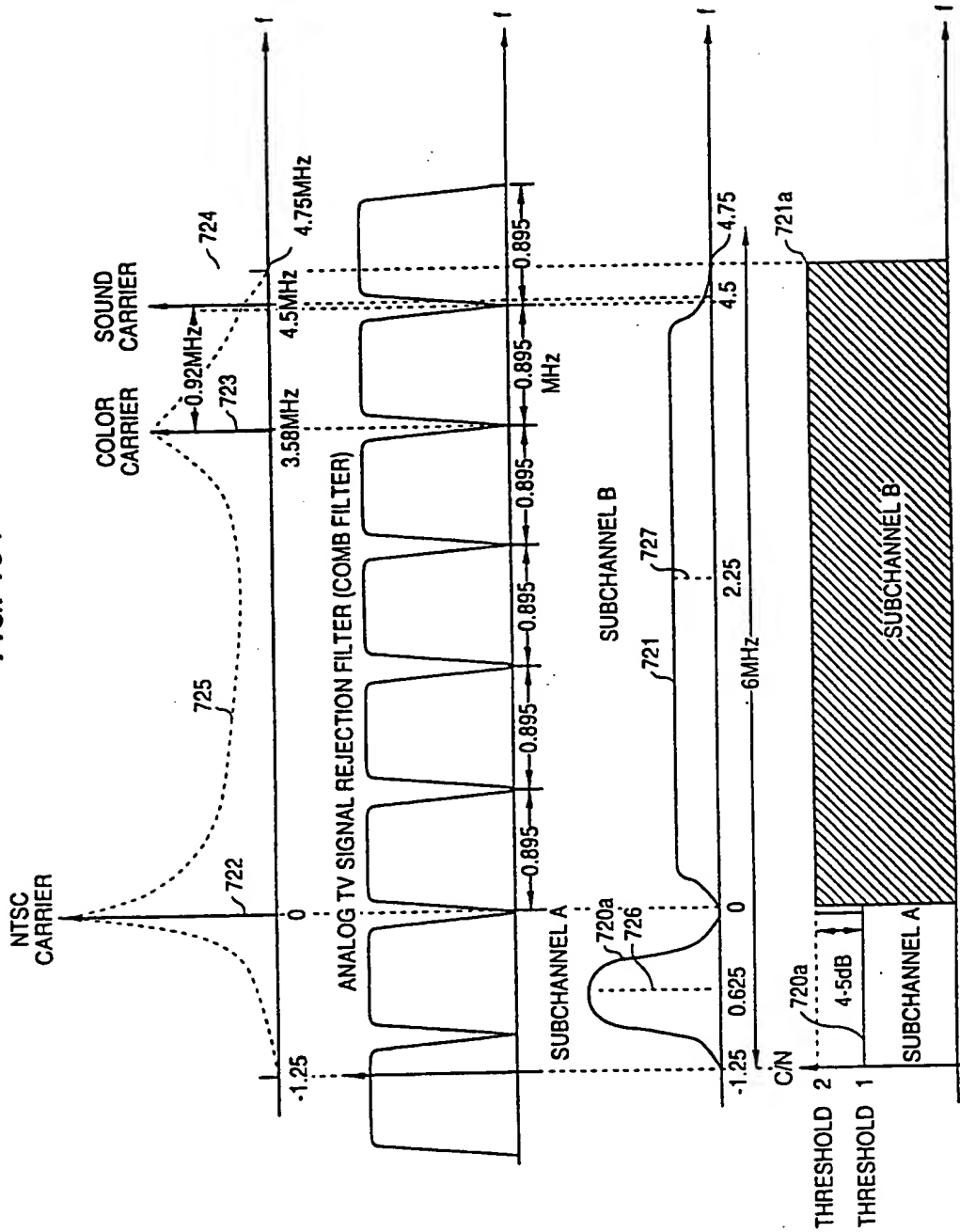


FIG. 135

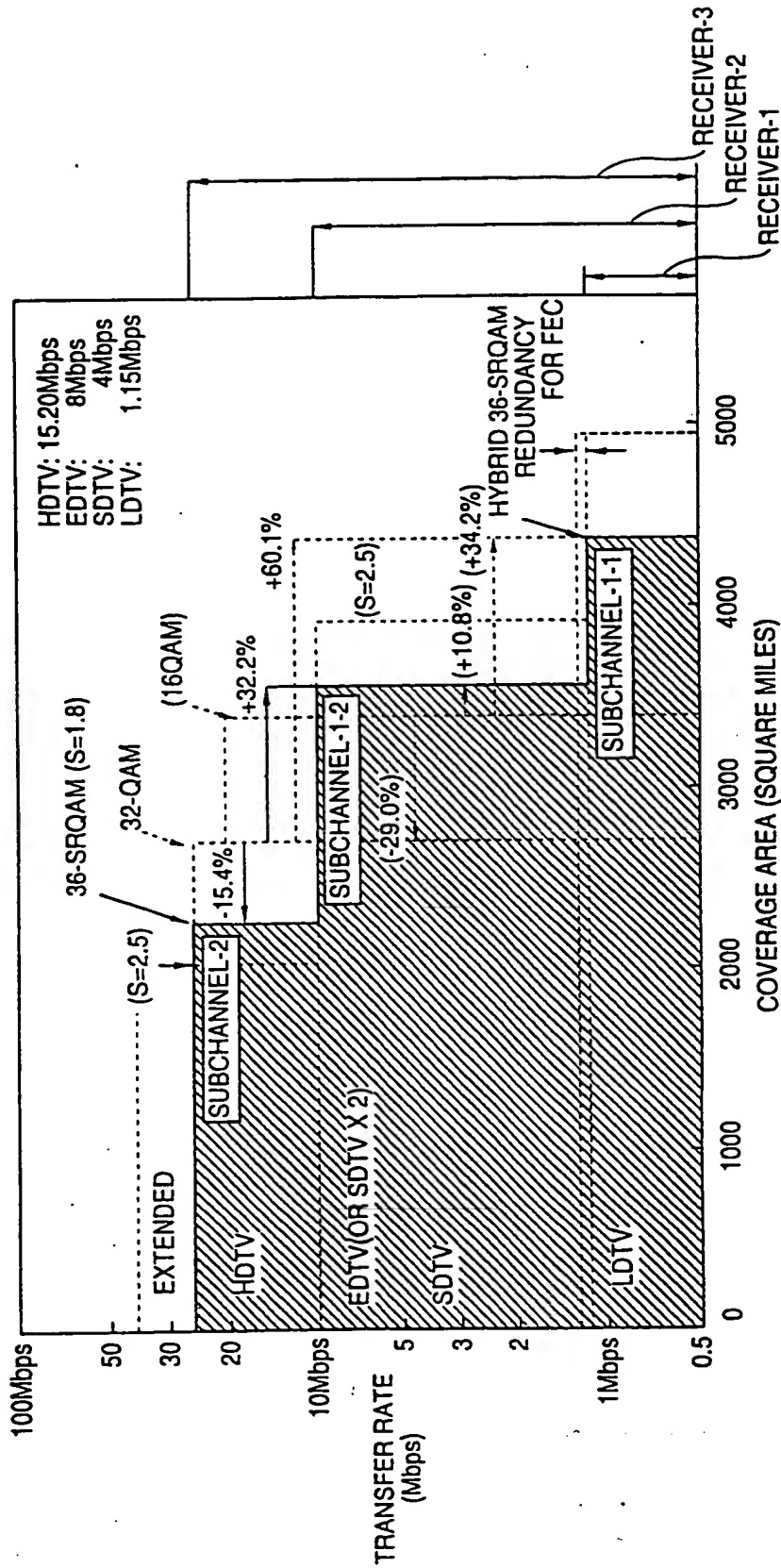


FIG. 136

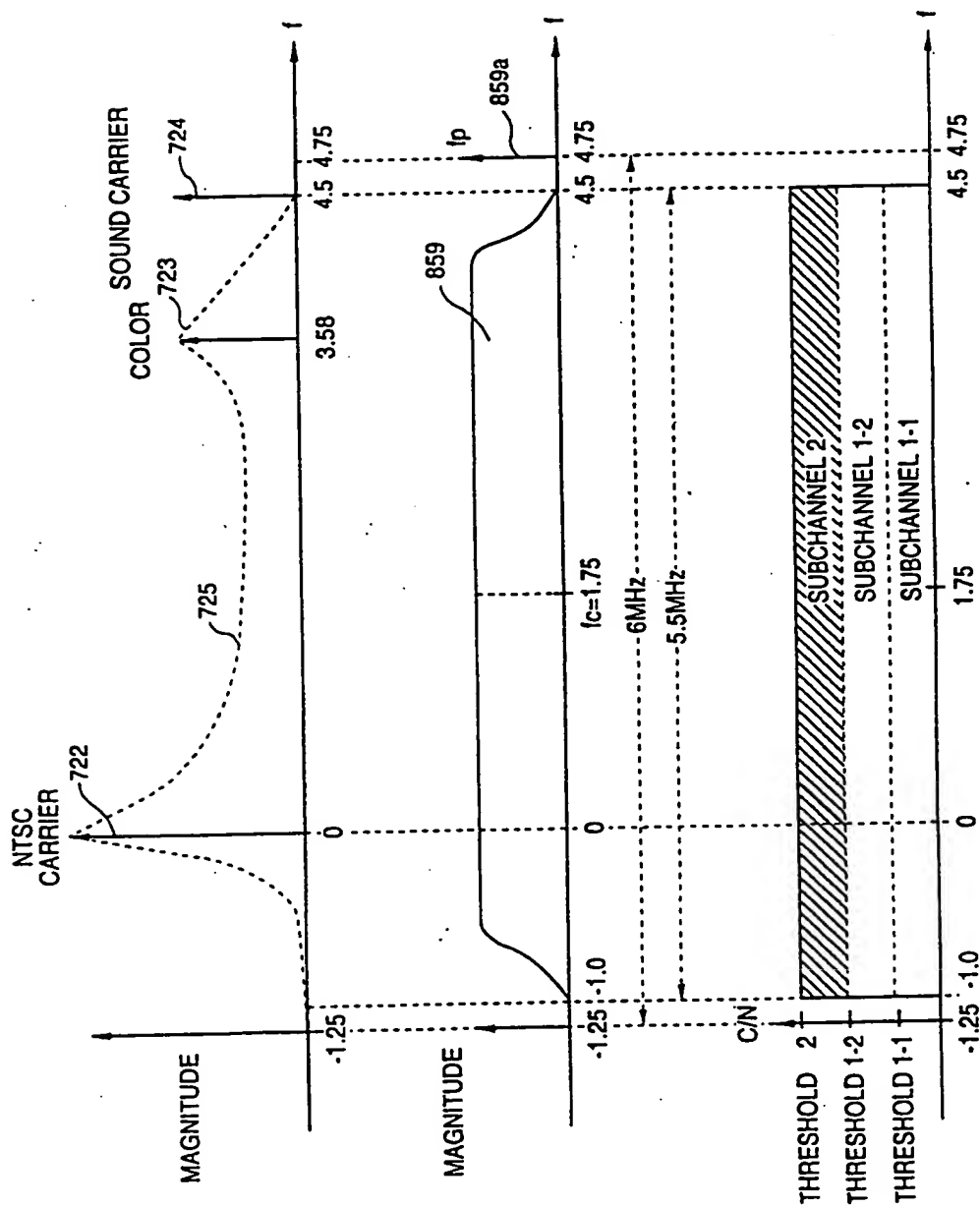


FIG. 137

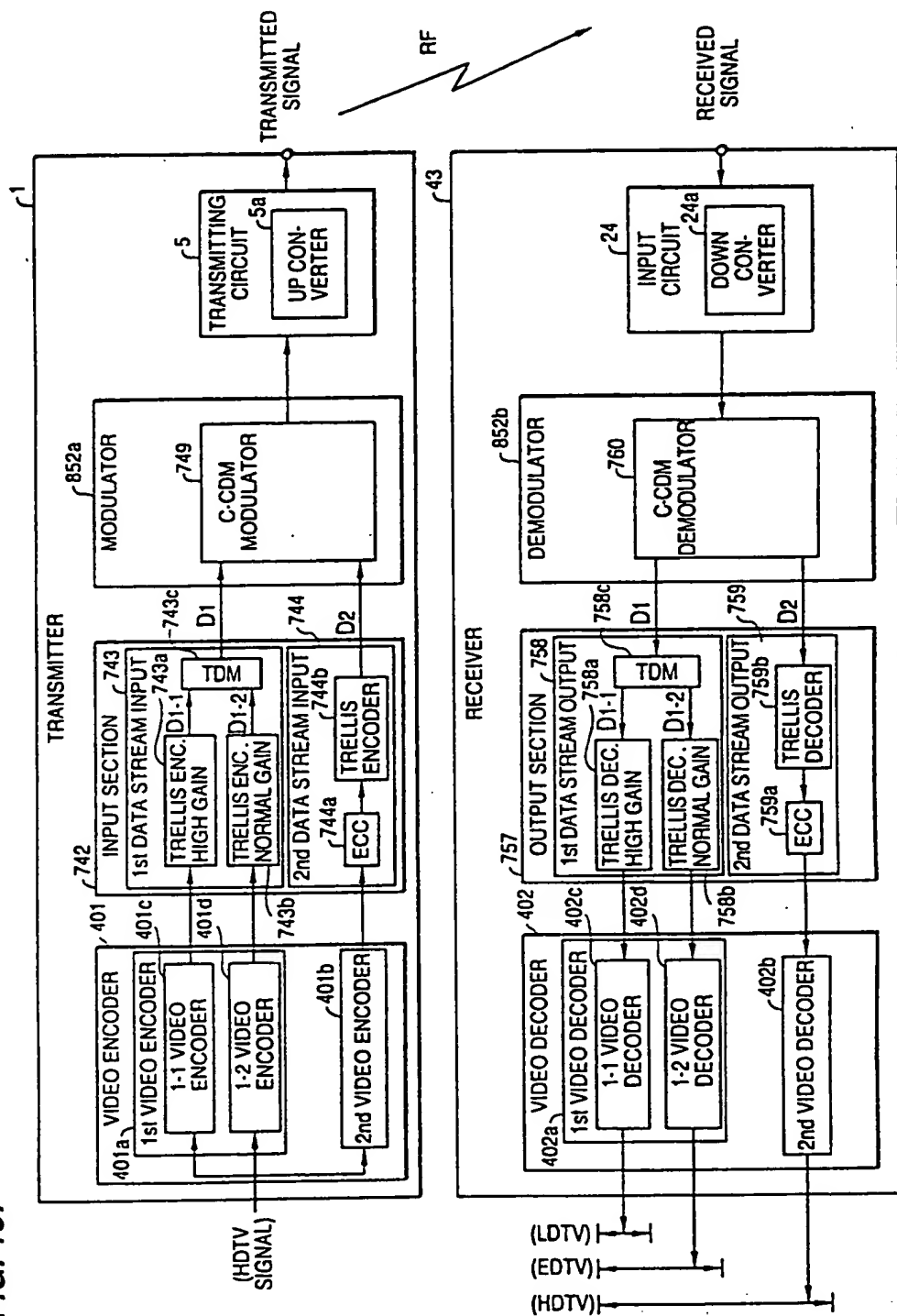


FIG. 139

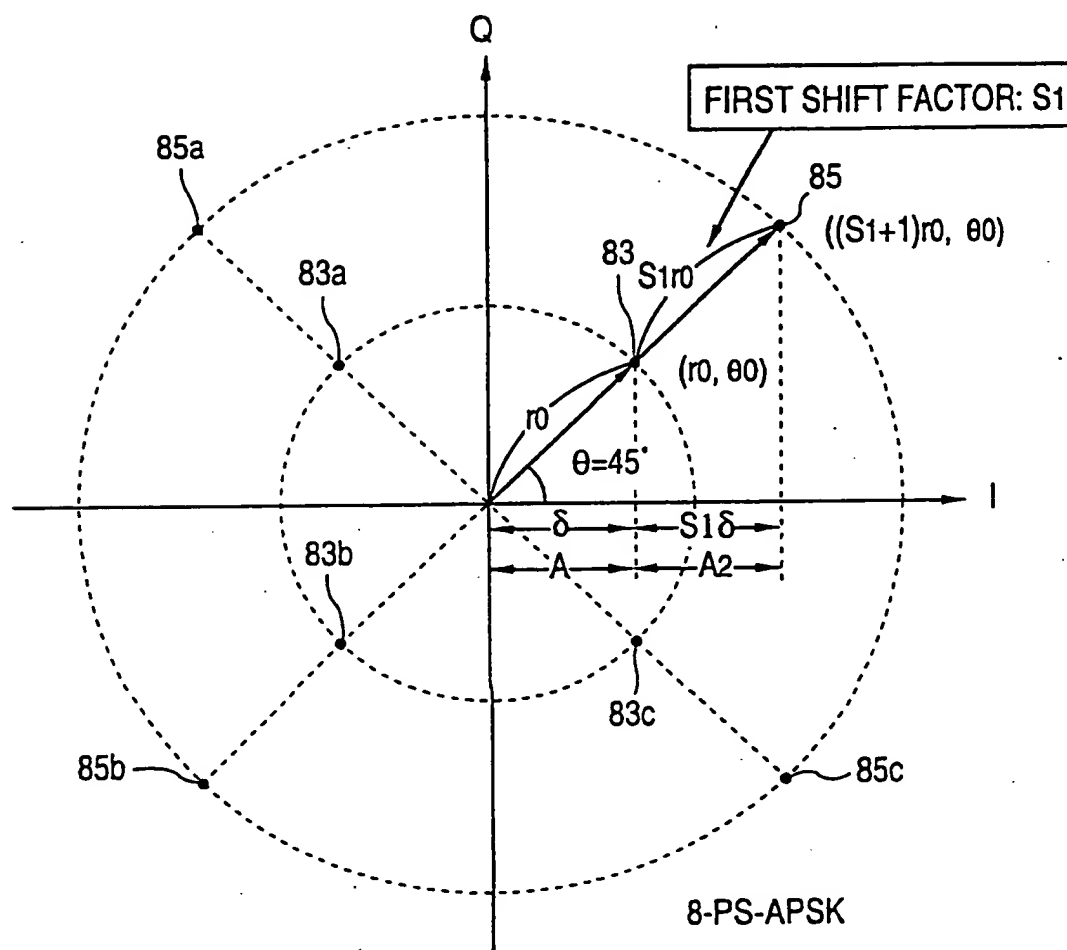


FIG. 140

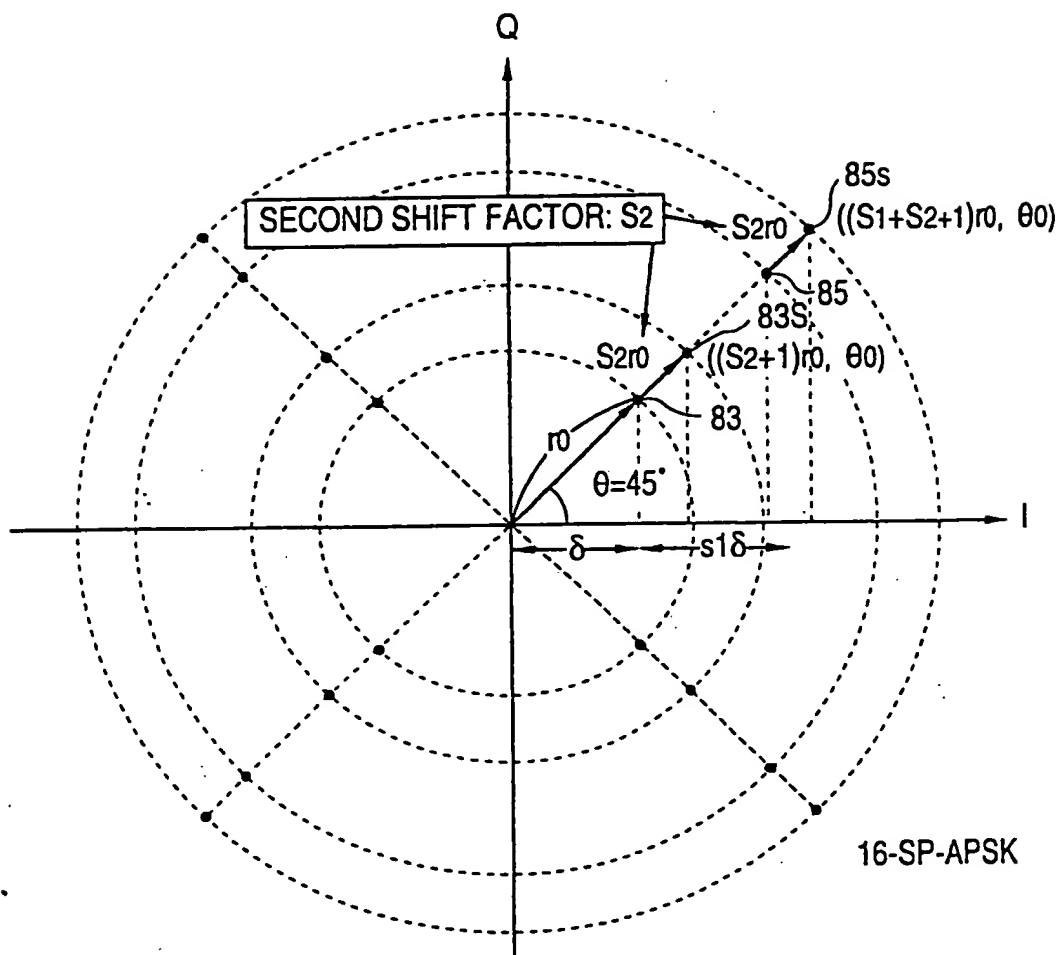


FIG. 141

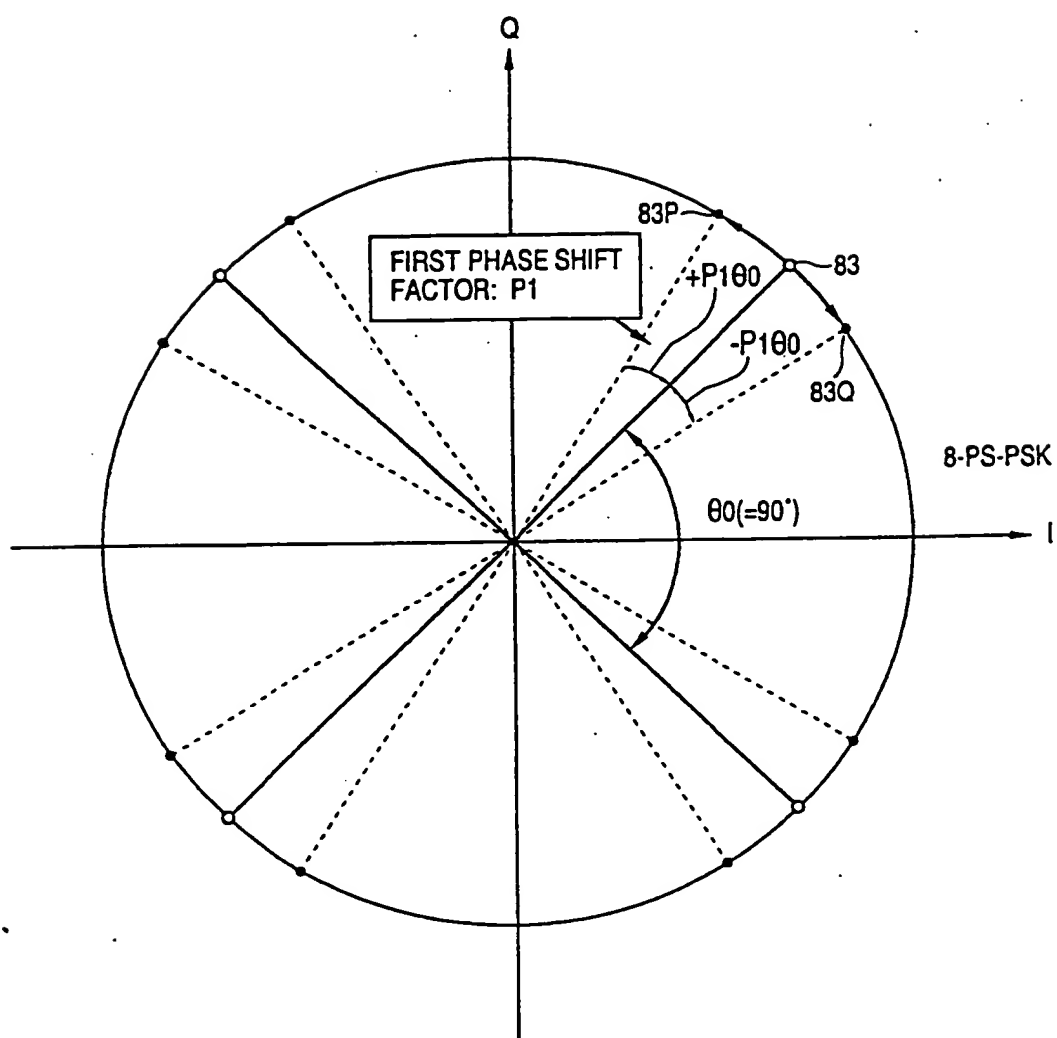


FIG. 142

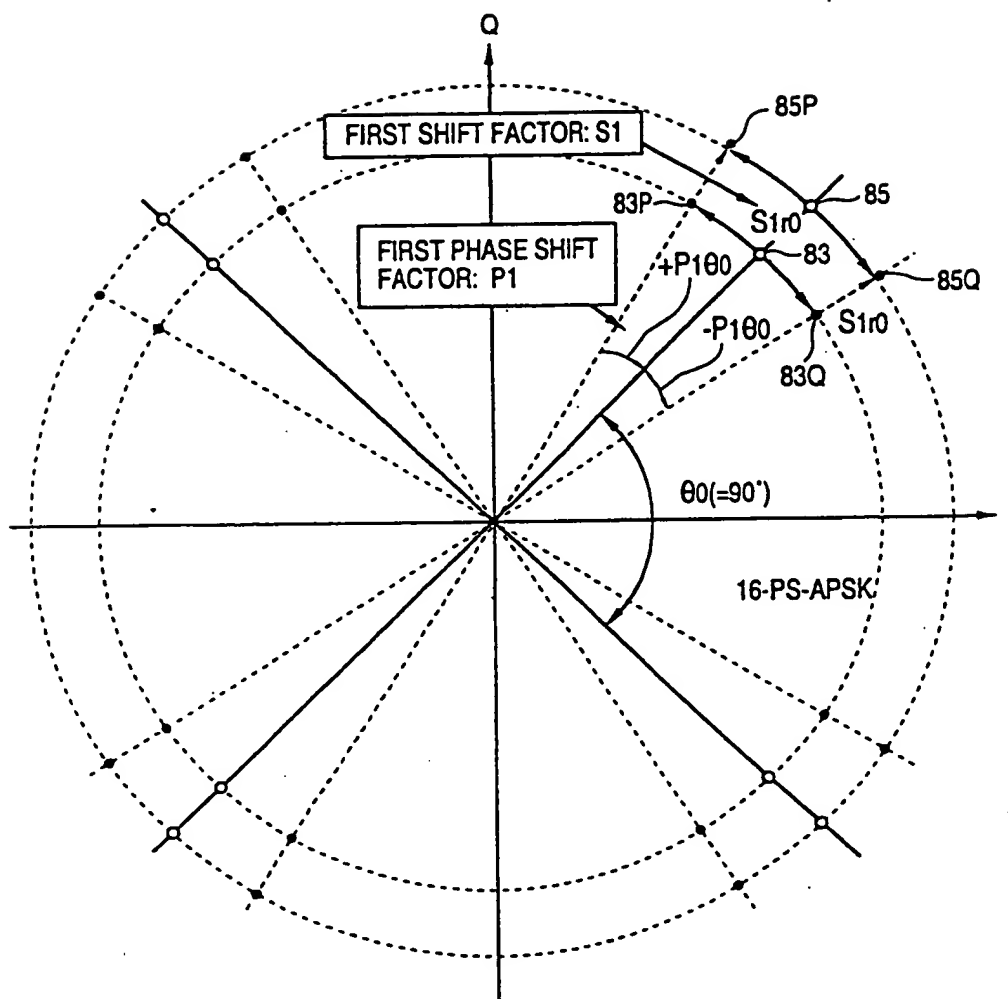


FIG. 143

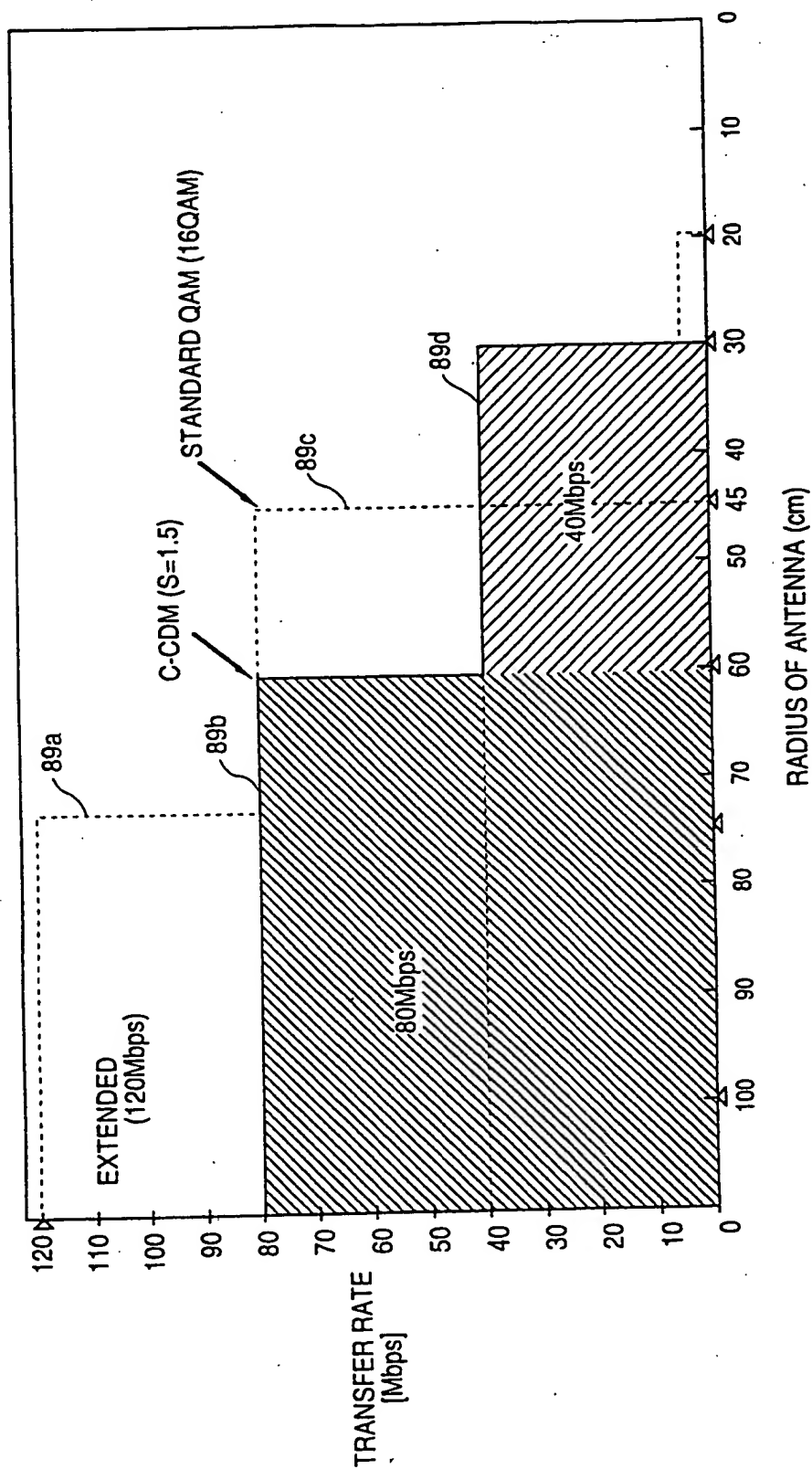


FIG. 144 (Amended)

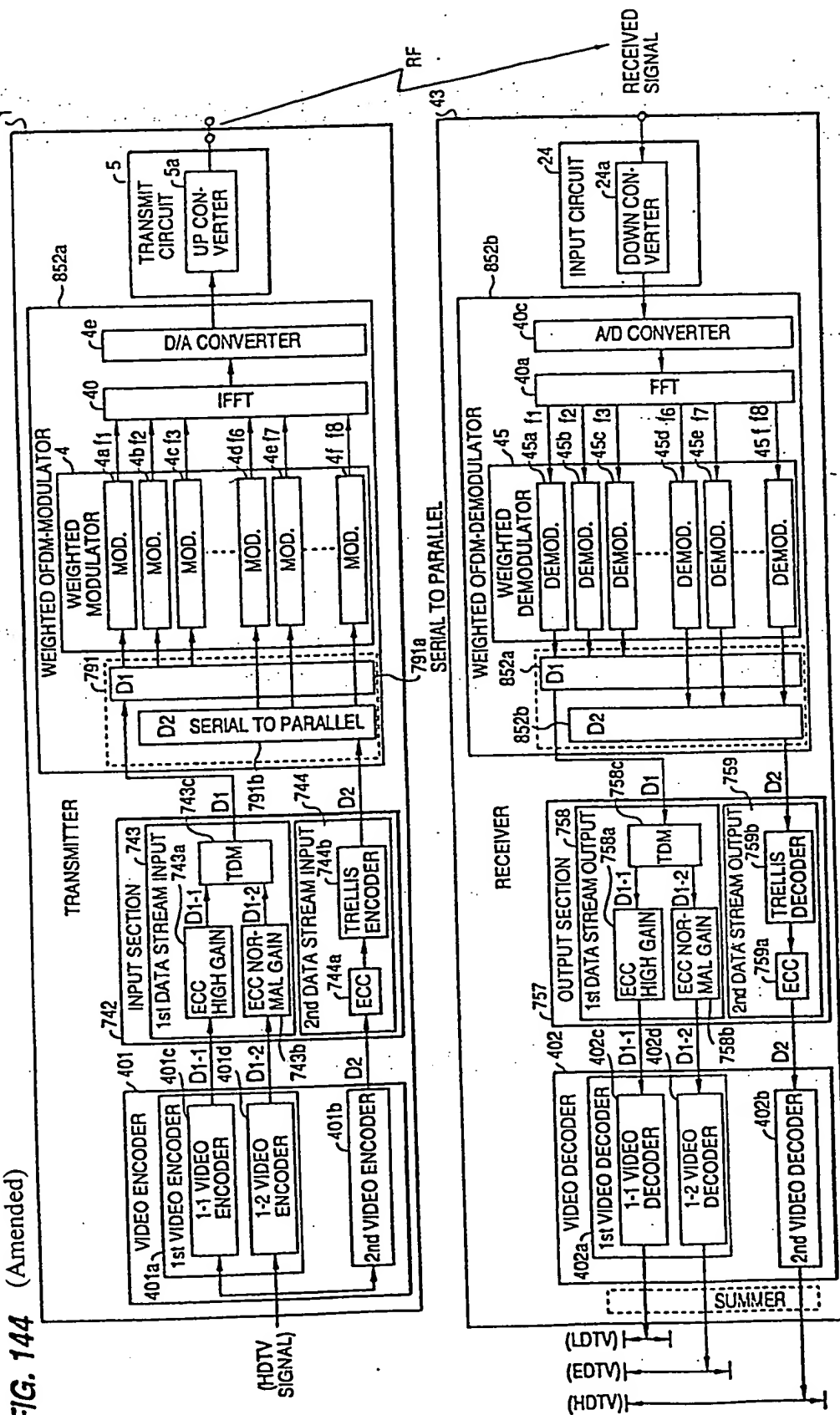


FIG. 145(a)

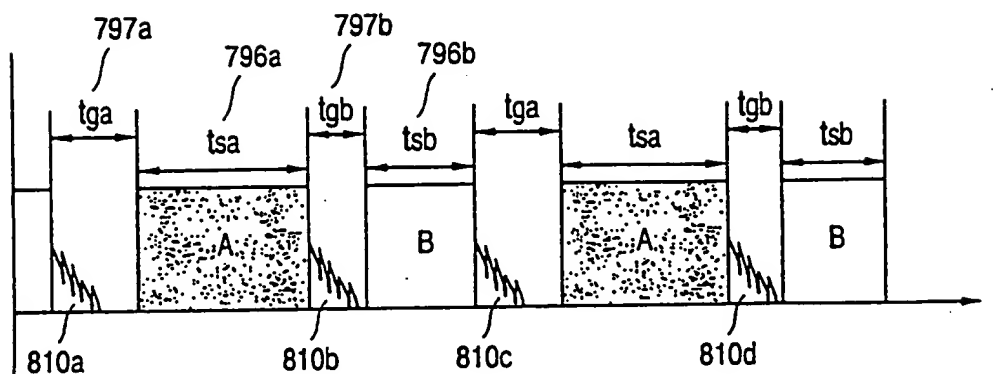


FIG. 145(b)

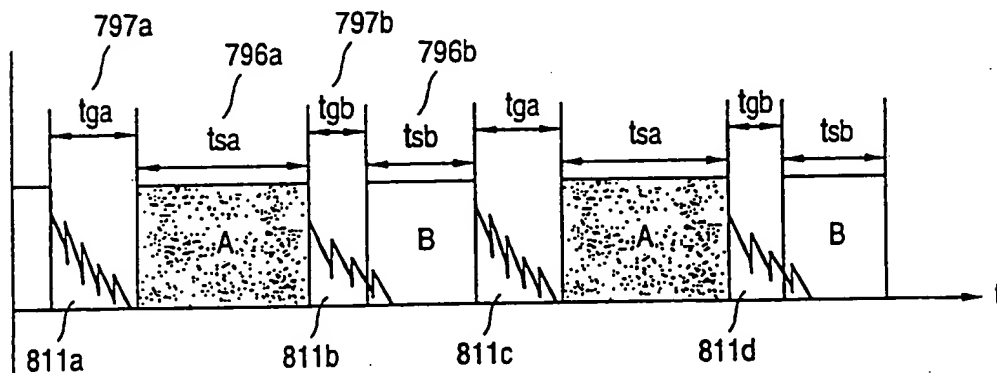


FIG. 147

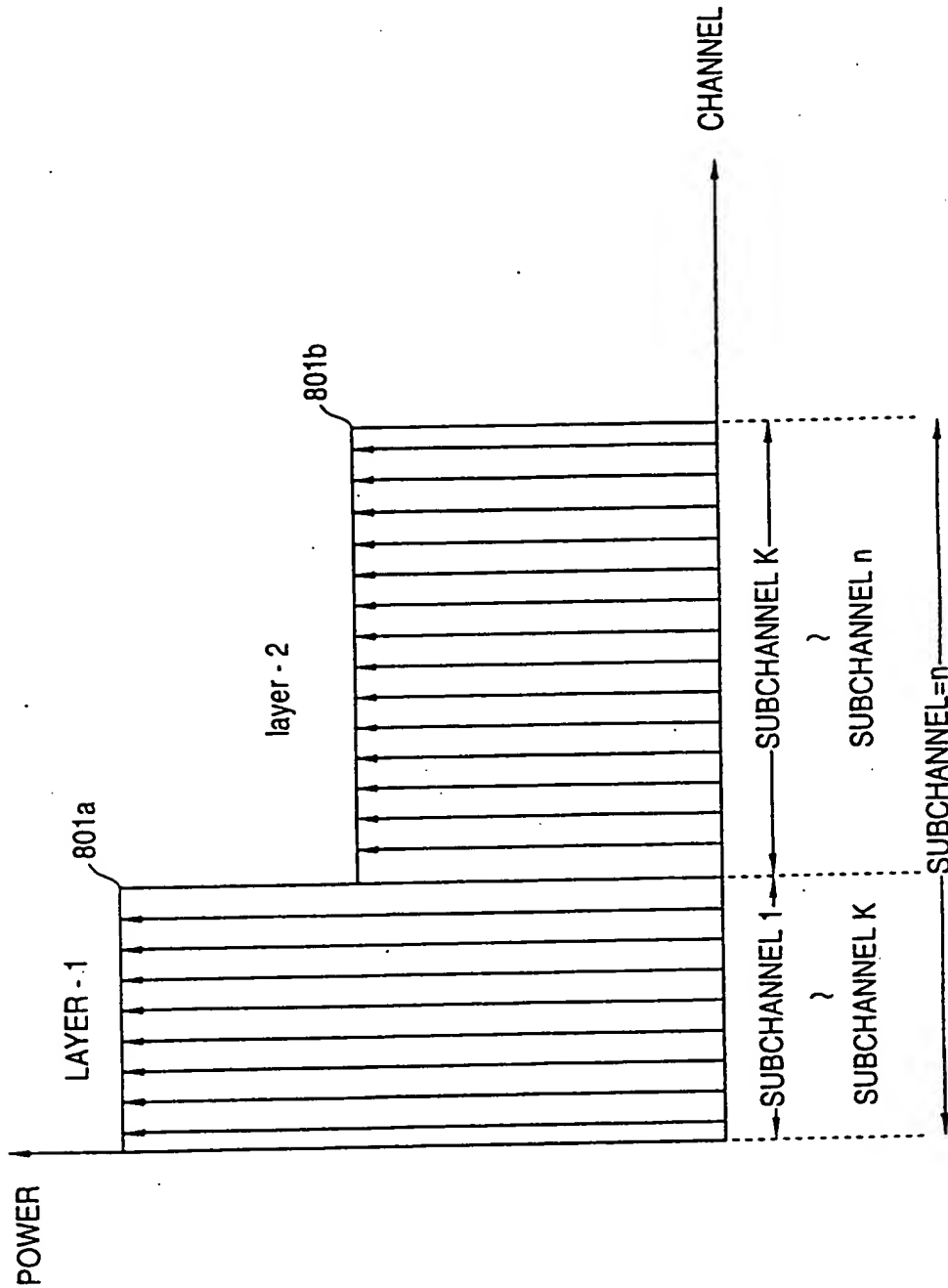


FIG. 148

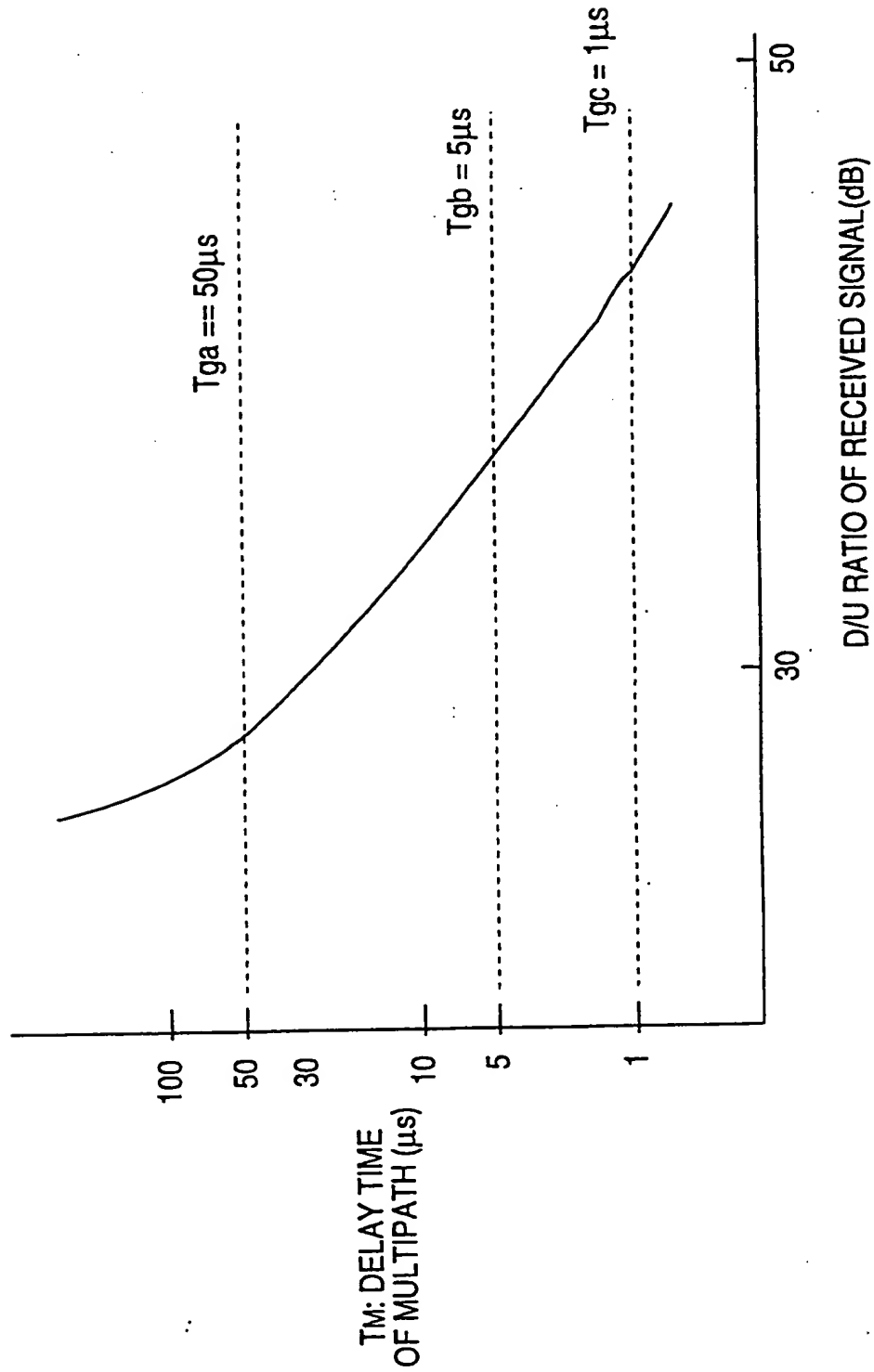




FIG. 149(a)

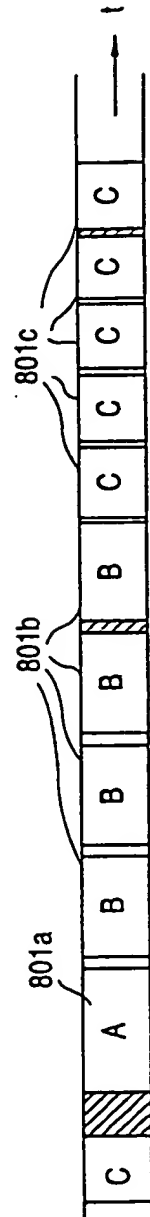


FIG. 149(b)

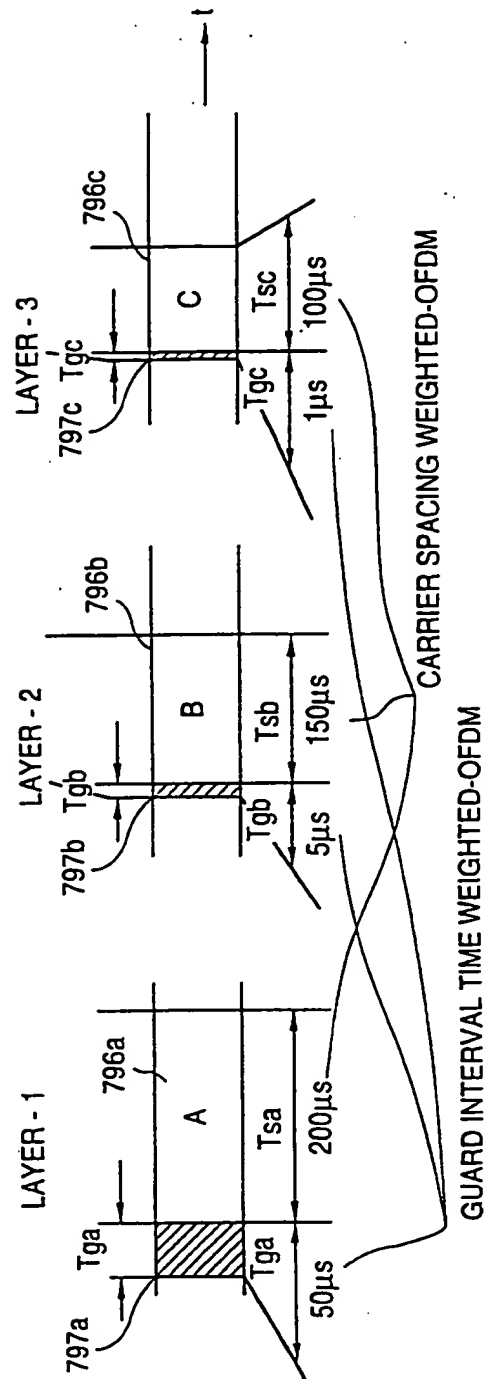


FIG. 149(c)

FIG. 150

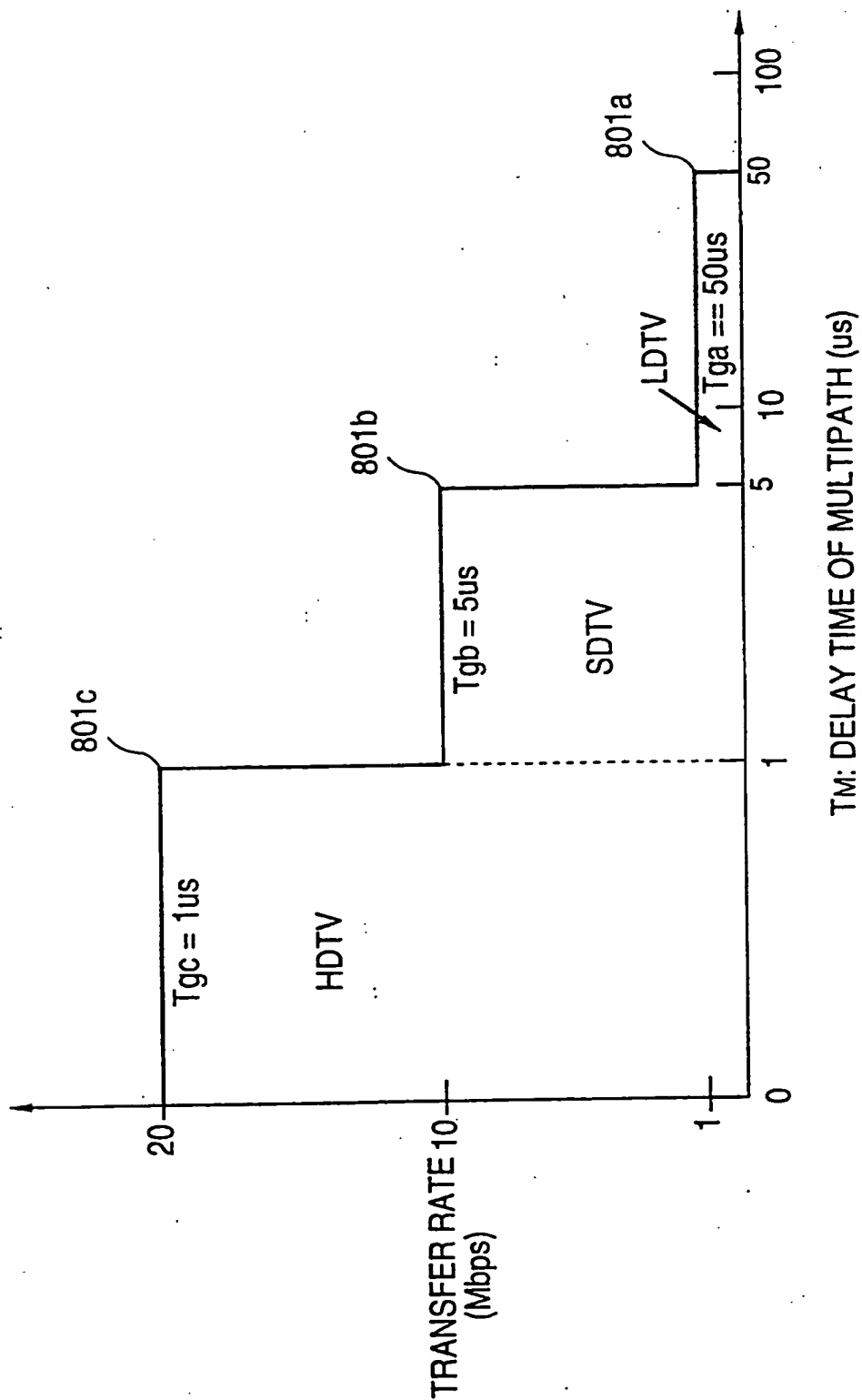


FIG. 151

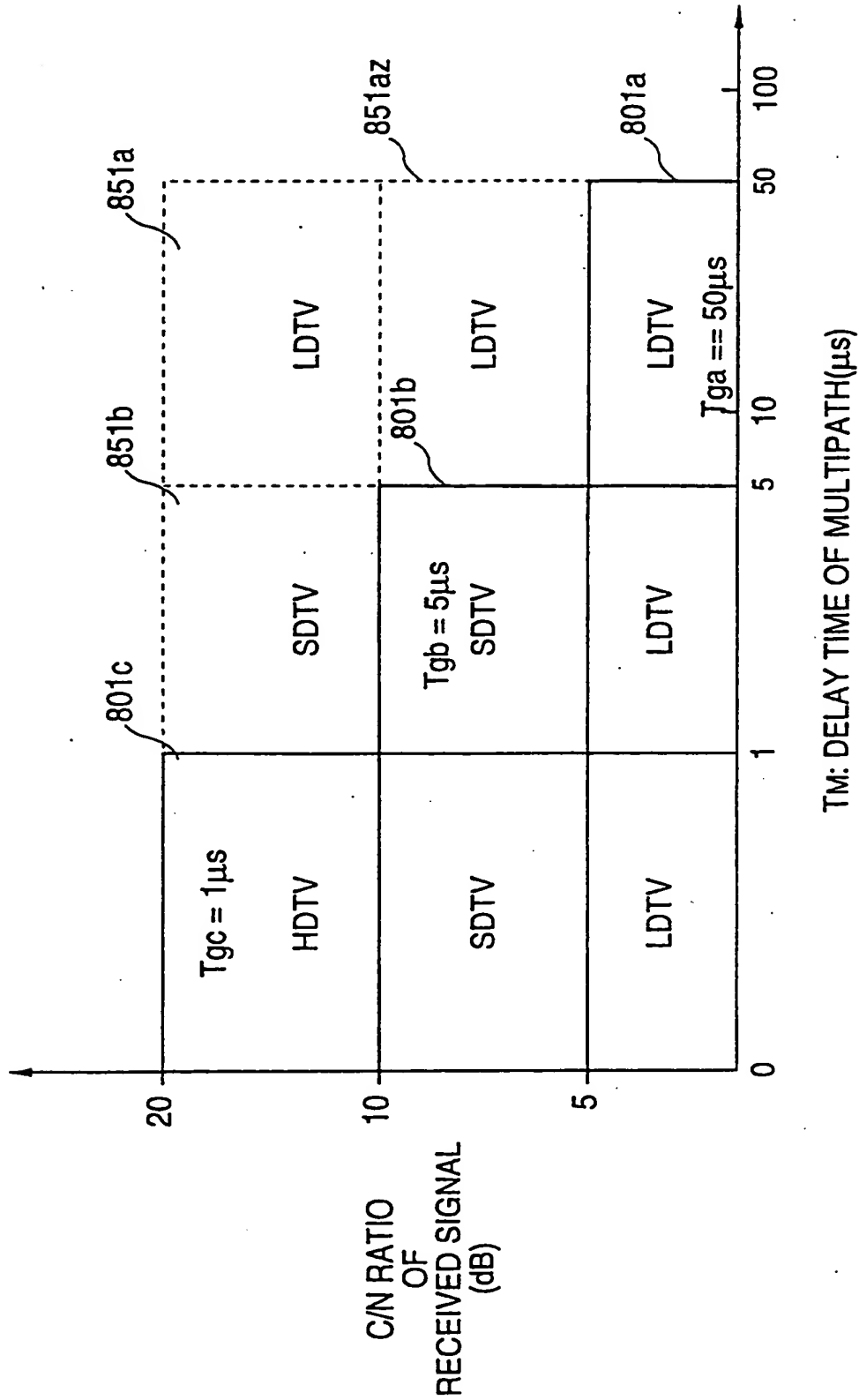


FIG. 152

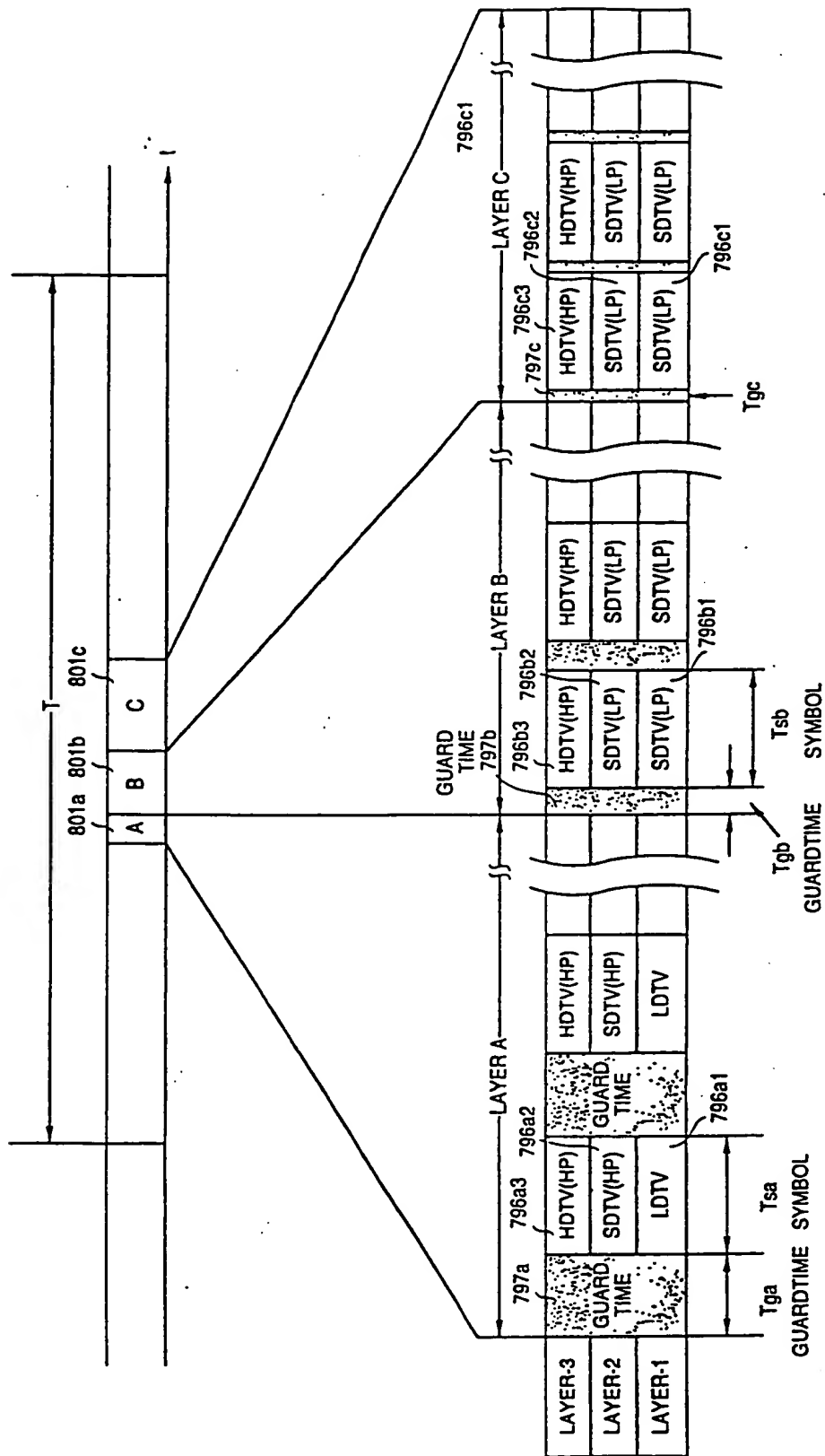
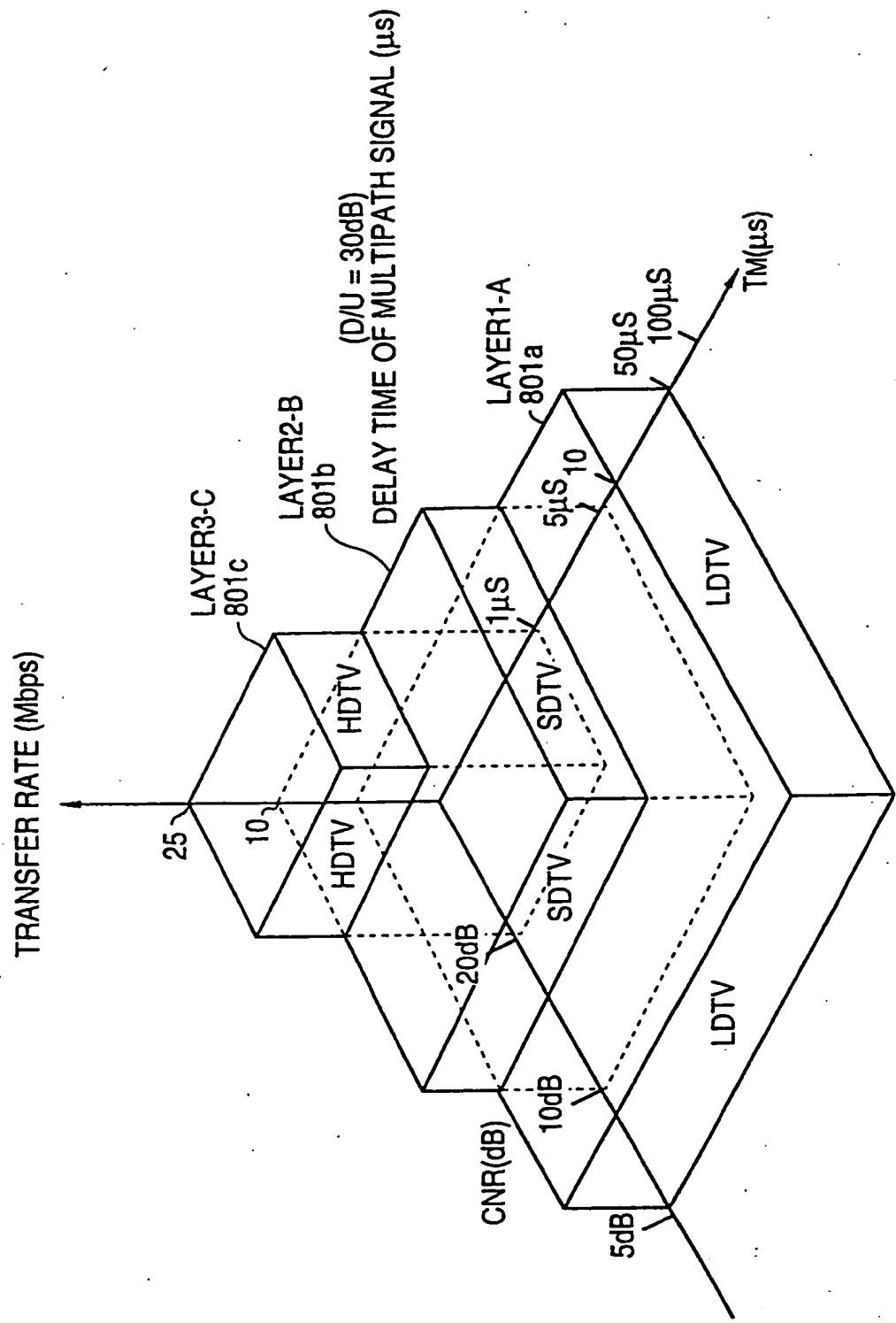


FIG. 153



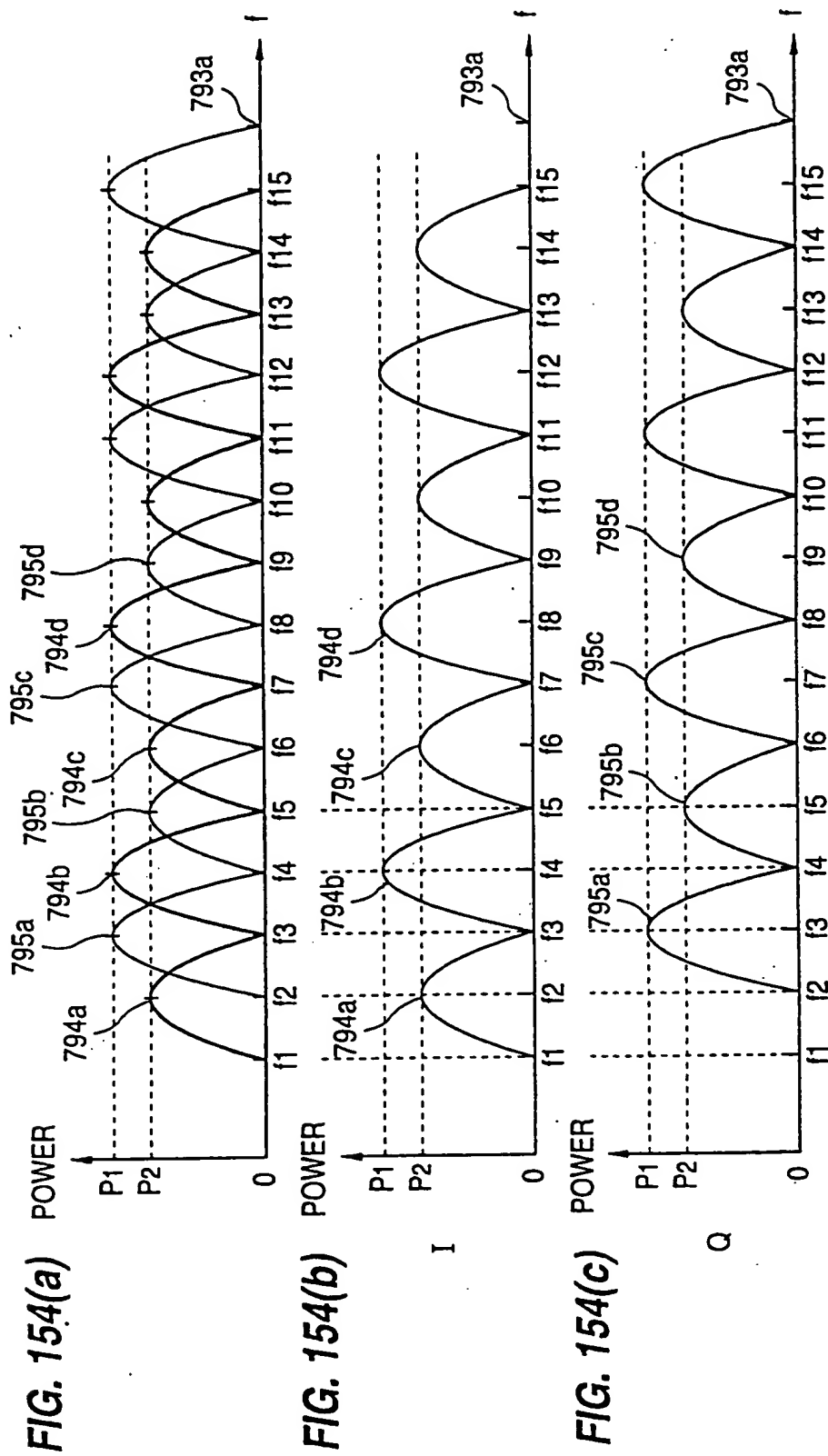


FIG. 155

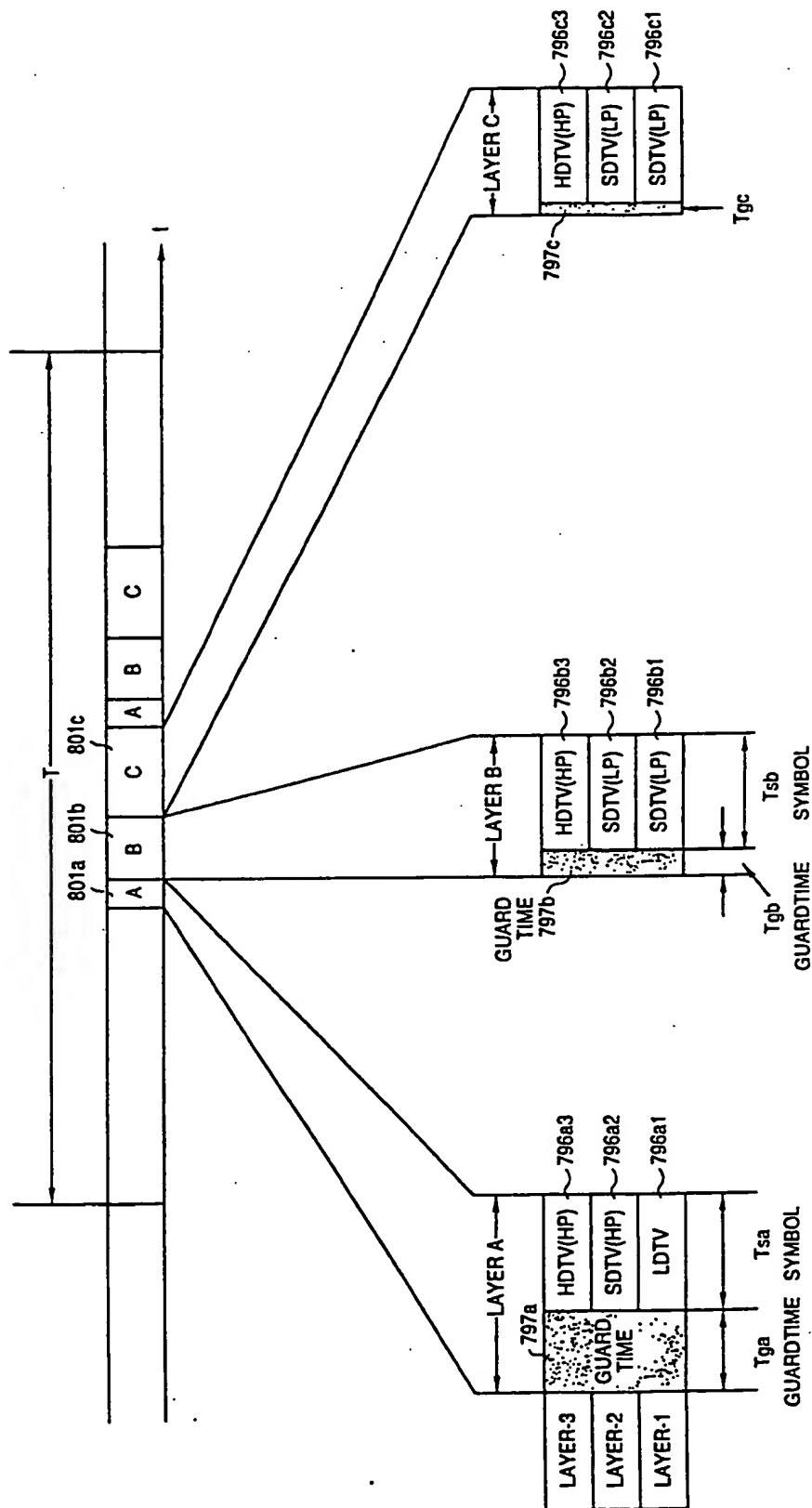


FIG. 156

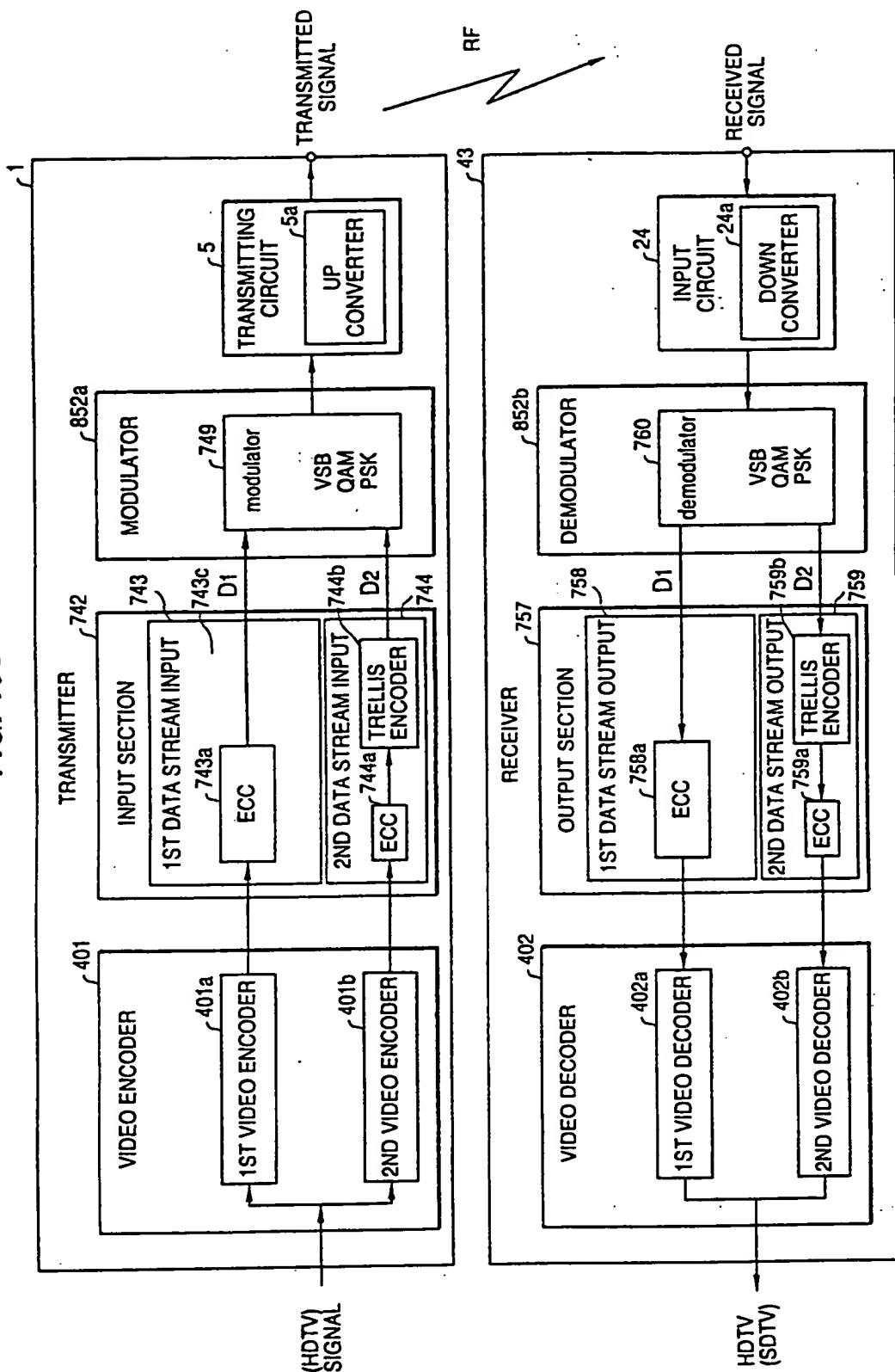


FIG. 157

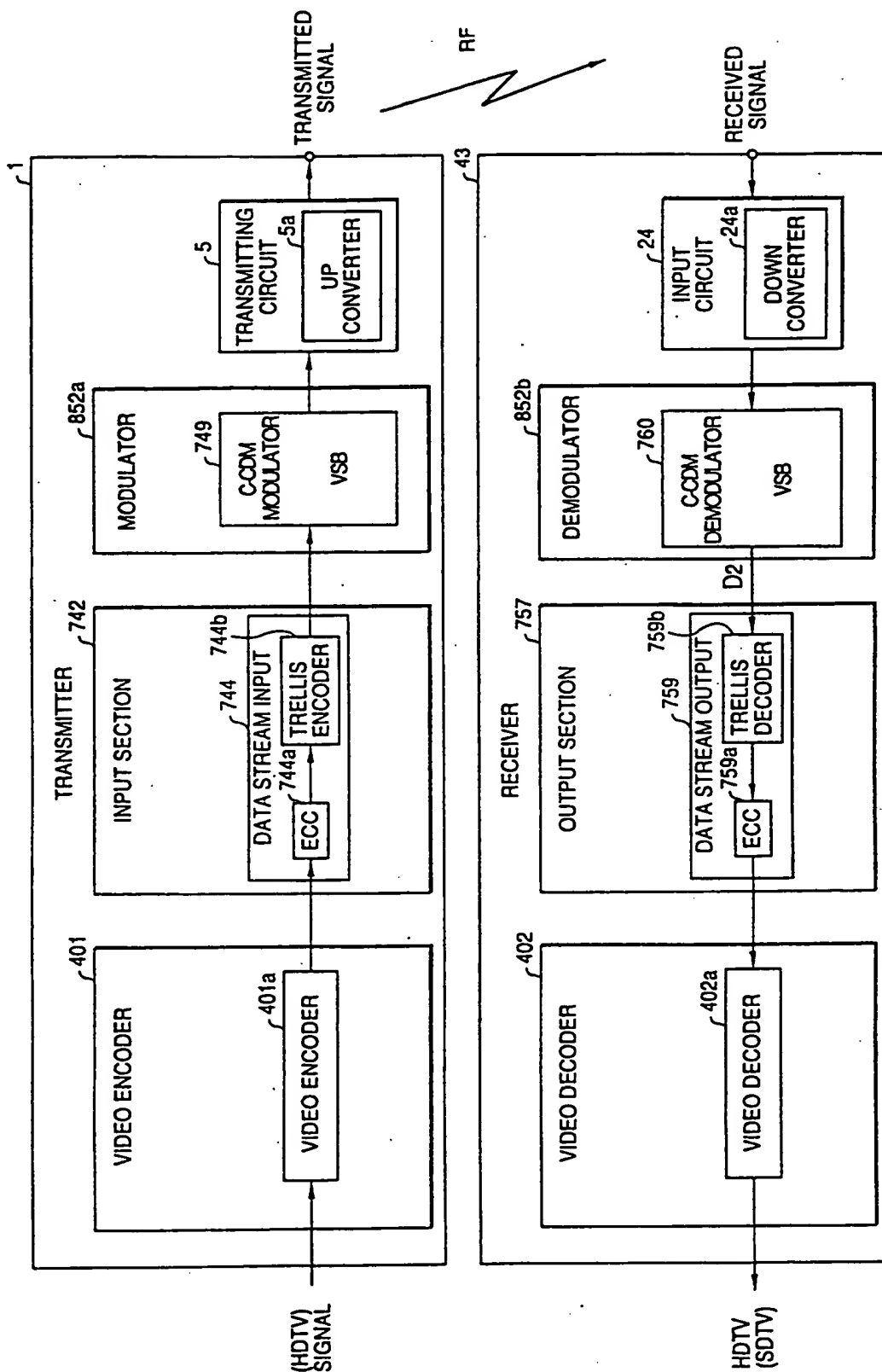
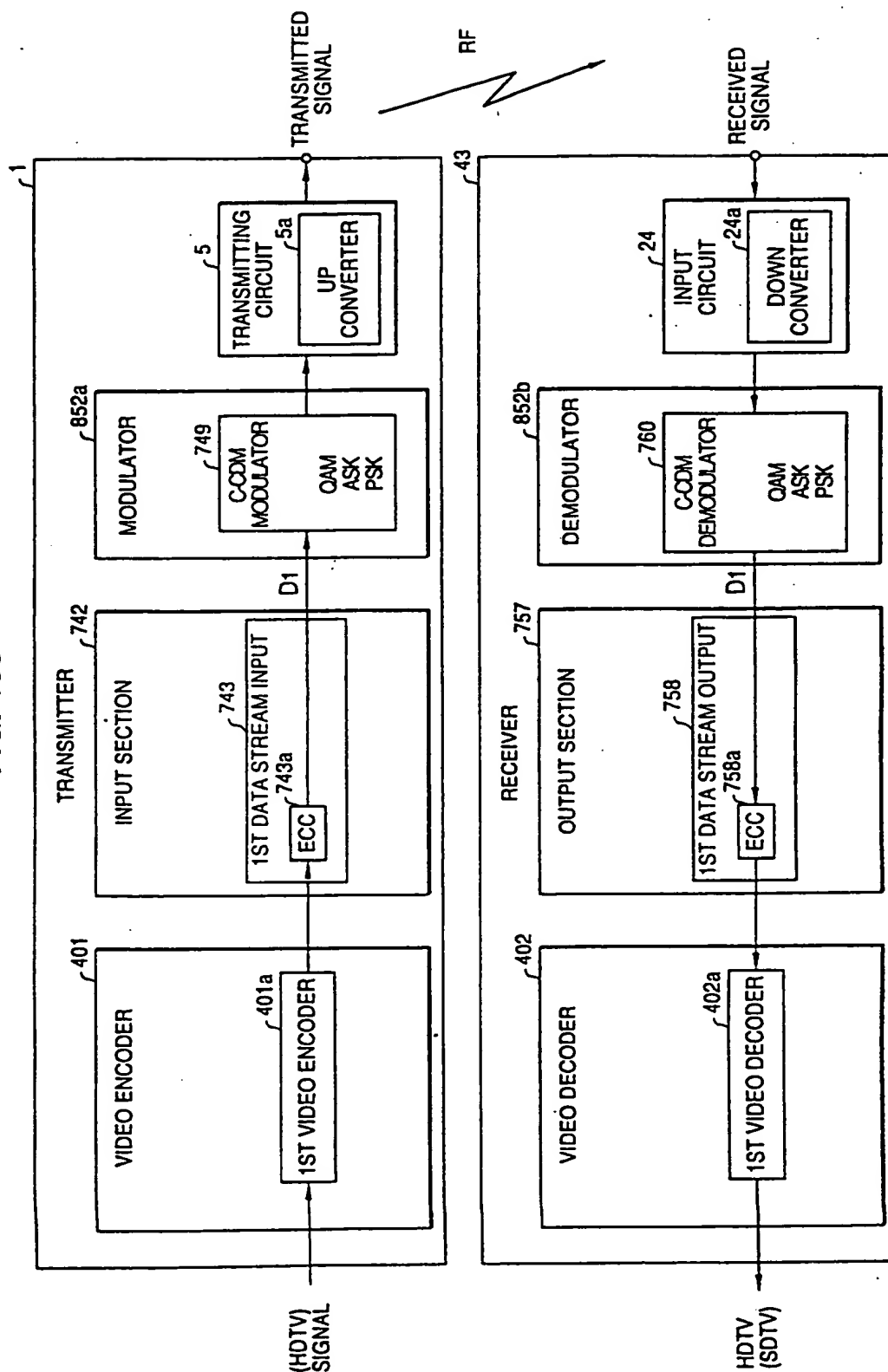


FIG. 158



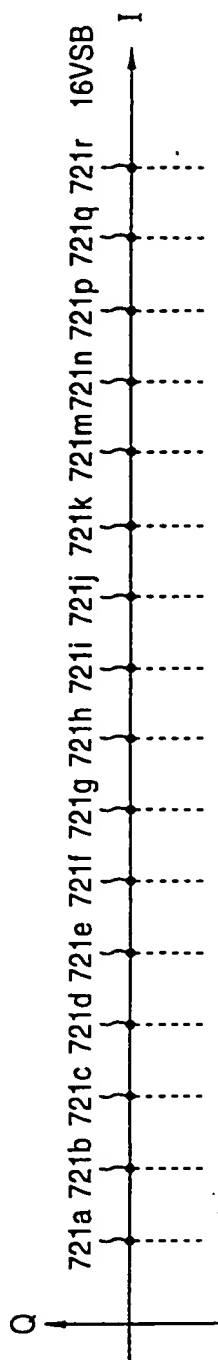


FIG. 159(a)

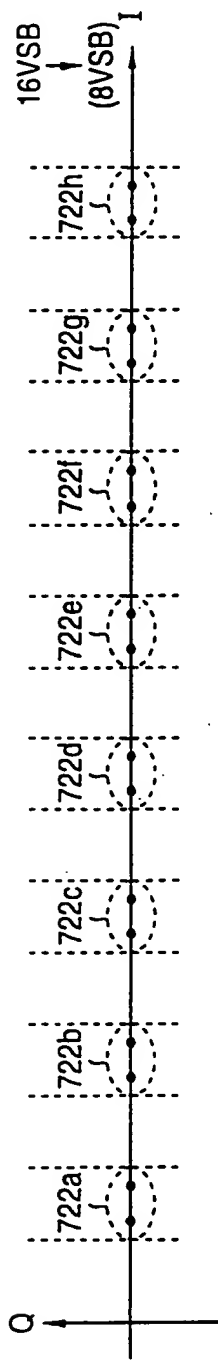


FIG. 159(b)

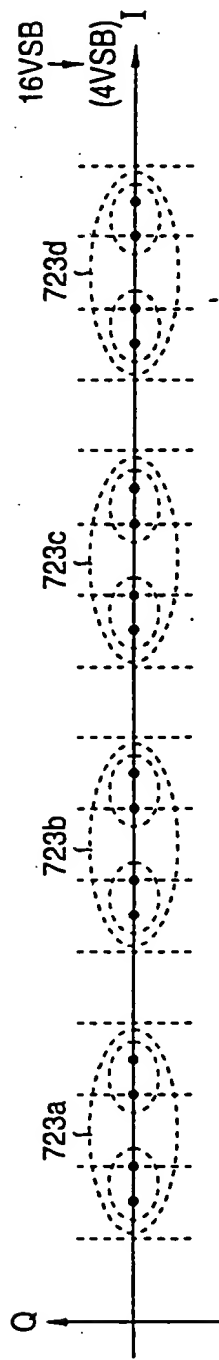


FIG. 159(c)

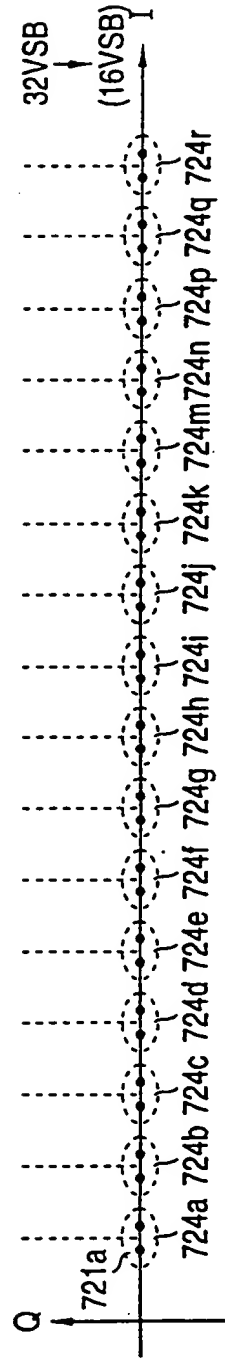


FIG. 159(d)

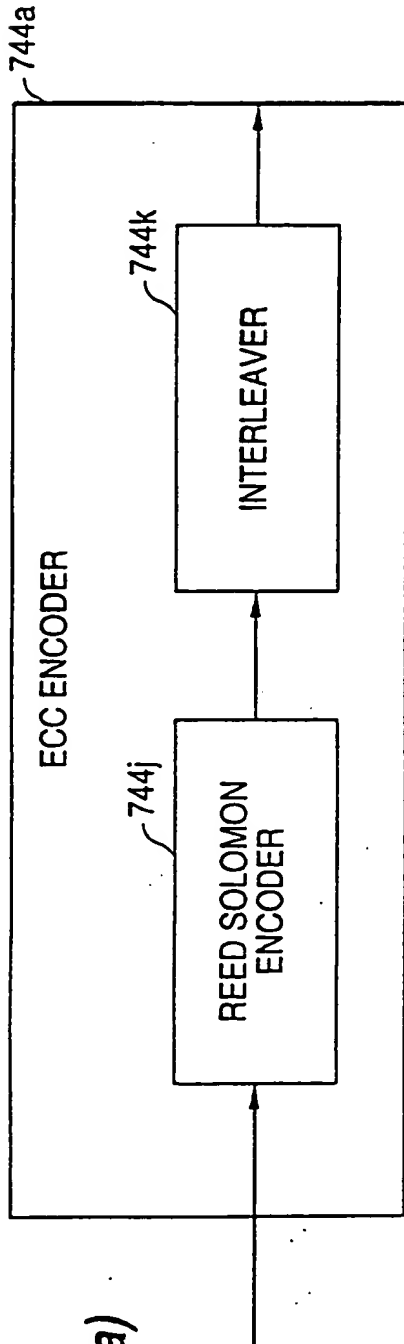


FIG. 160(a)

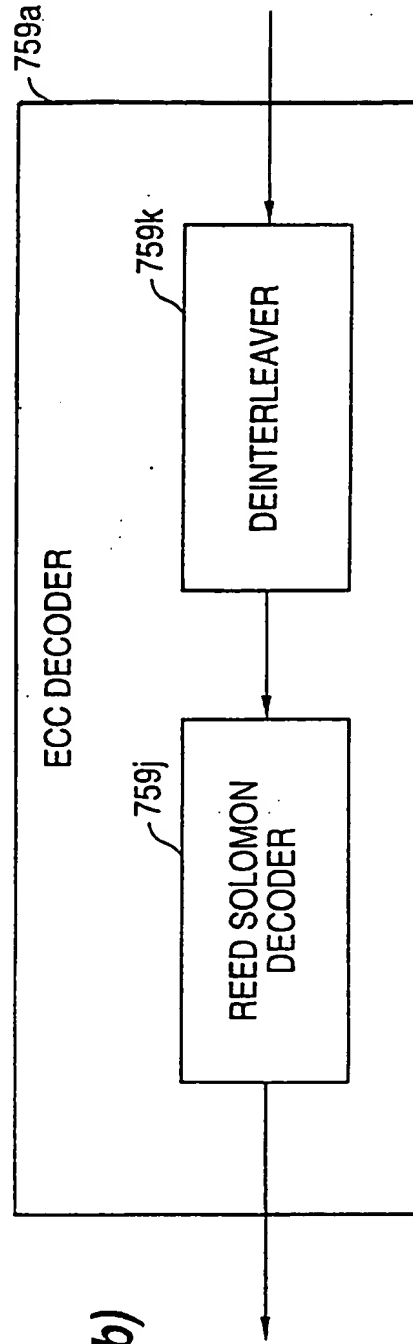


FIG. 160(b)

FIG. 161

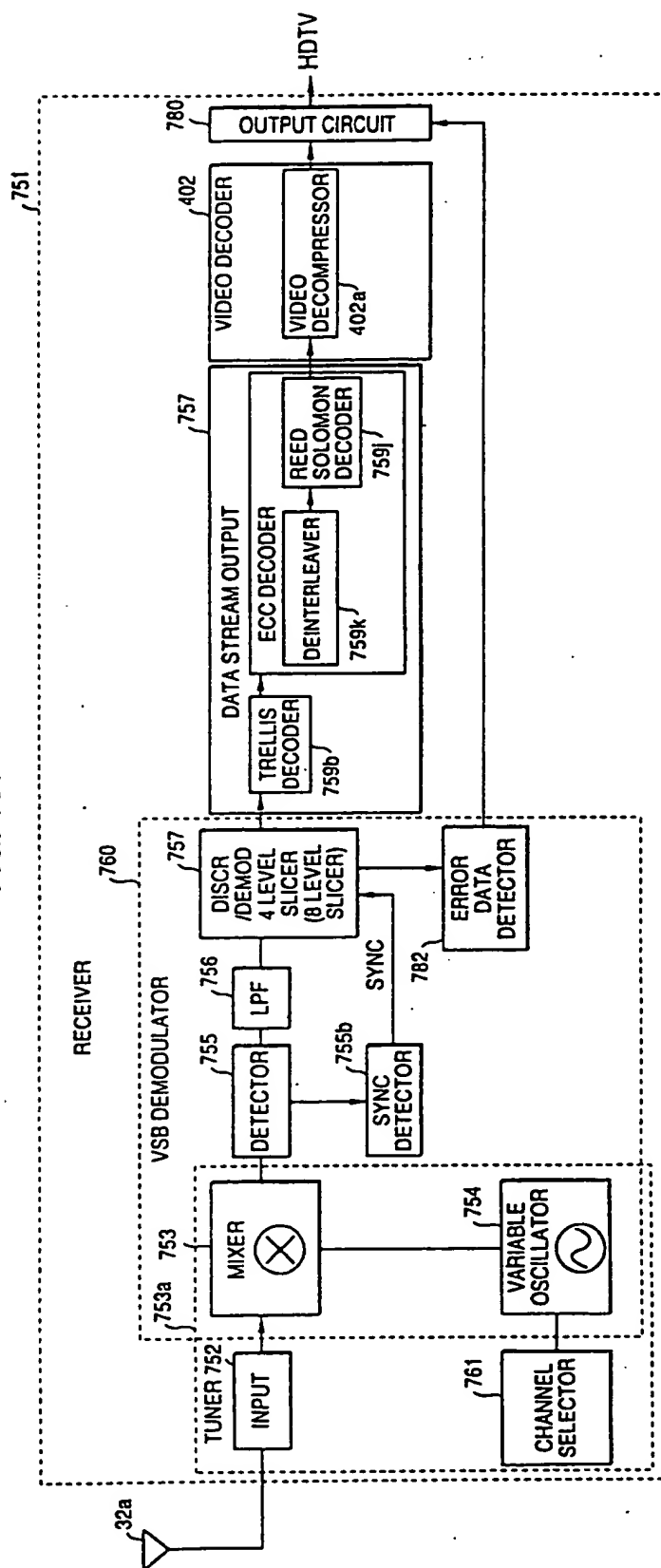


FIG. 162

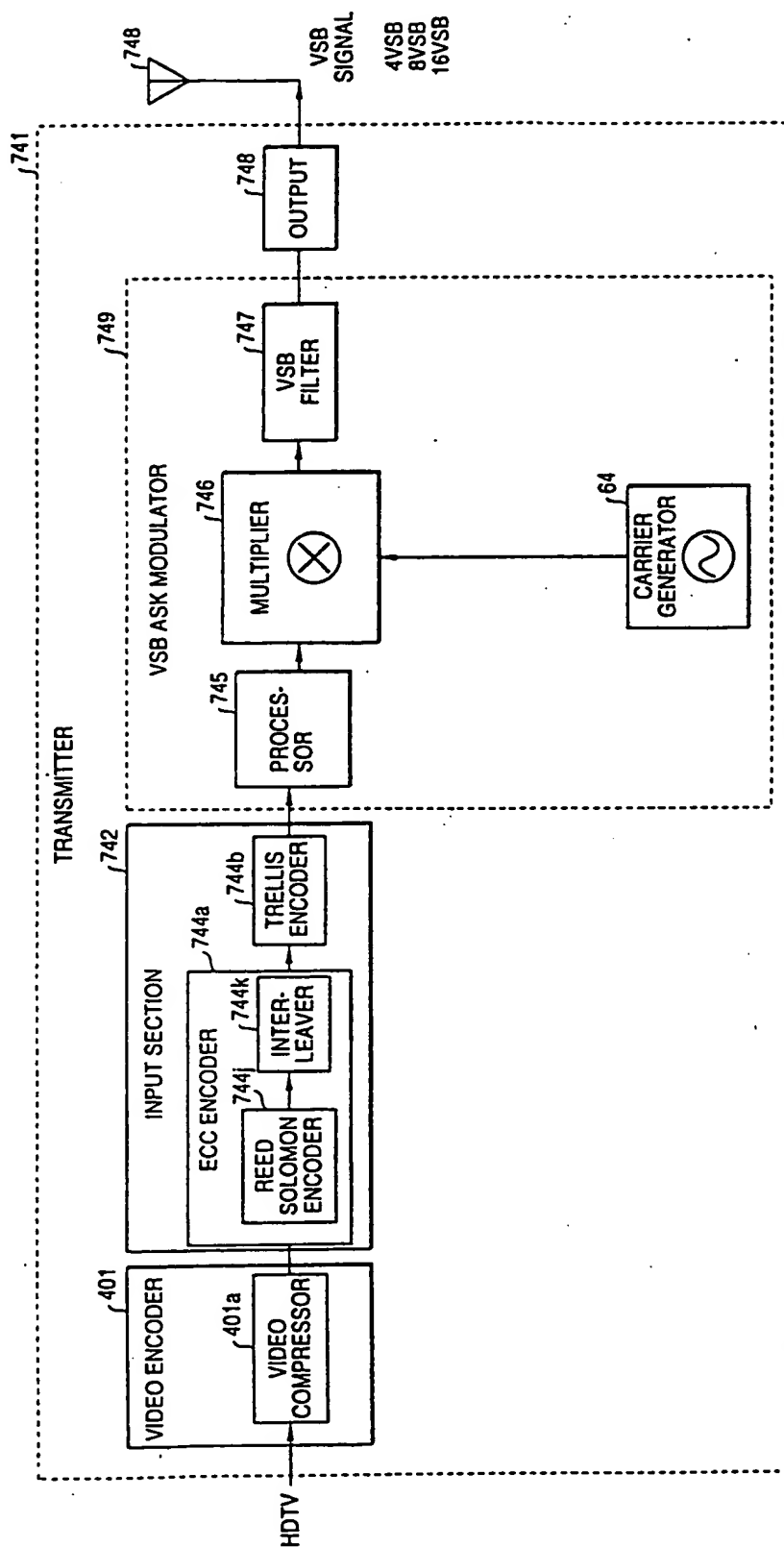


FIG. 163

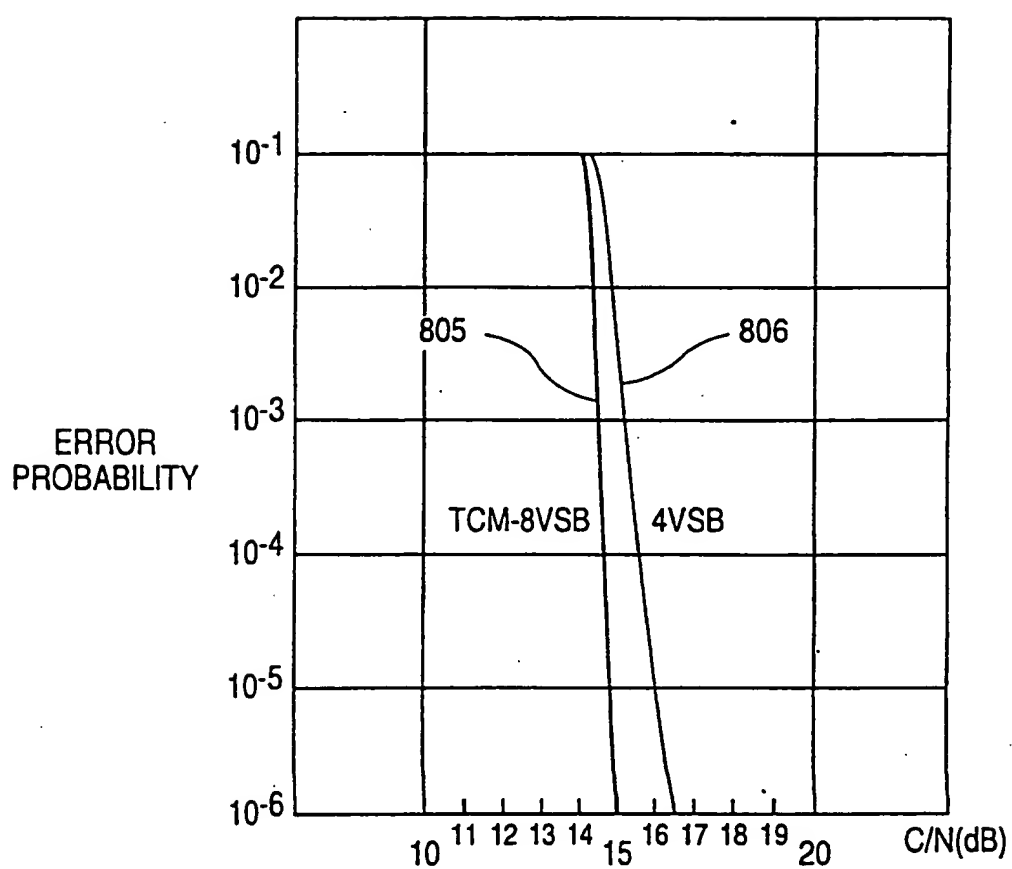


FIG. 164

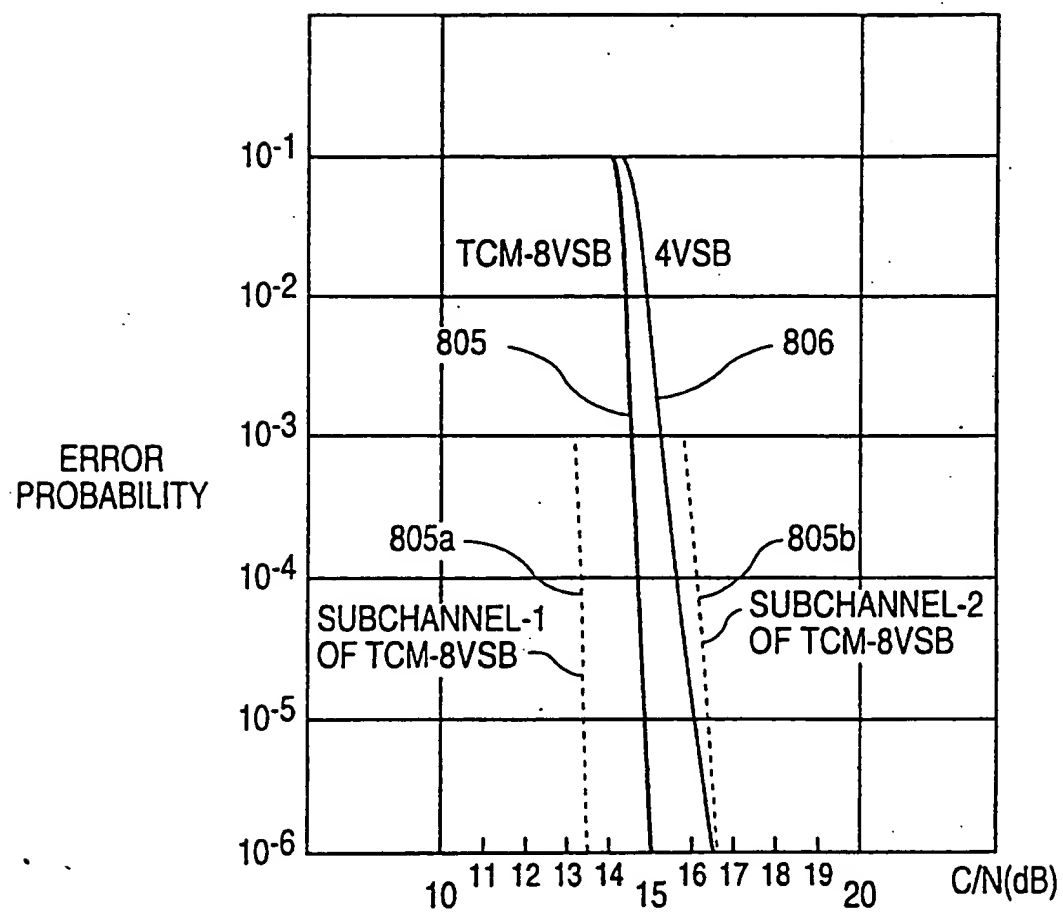


FIG. 165(a)

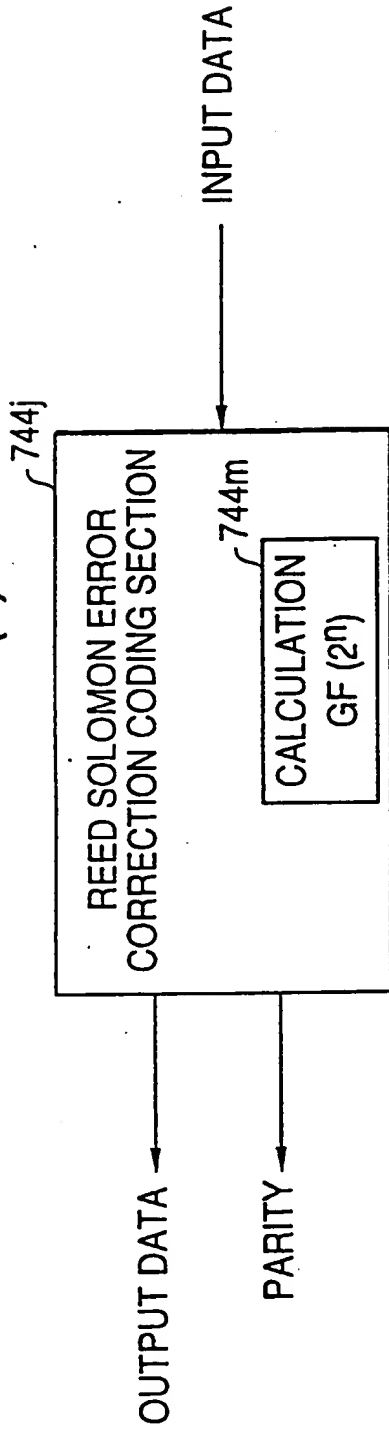


FIG. 165(b)

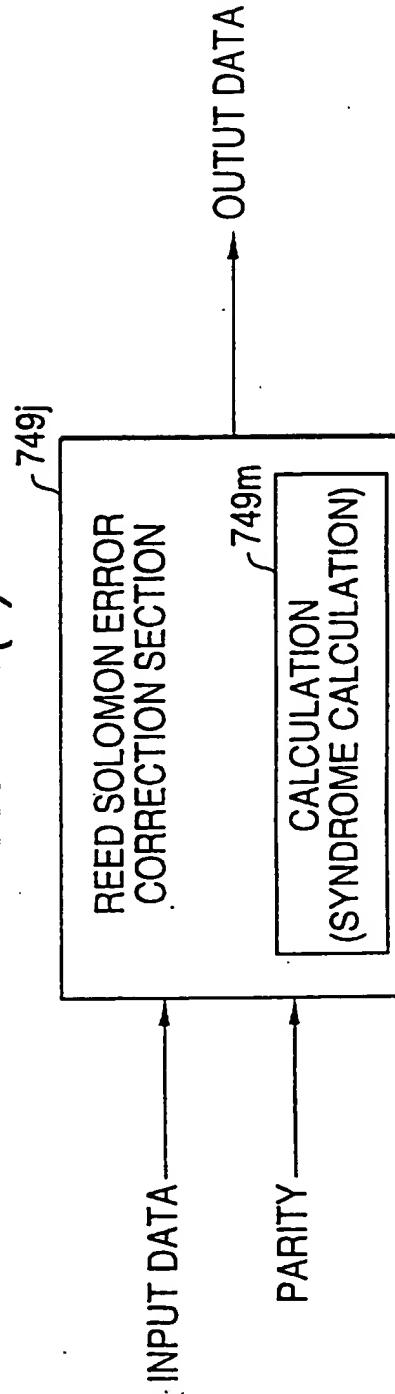


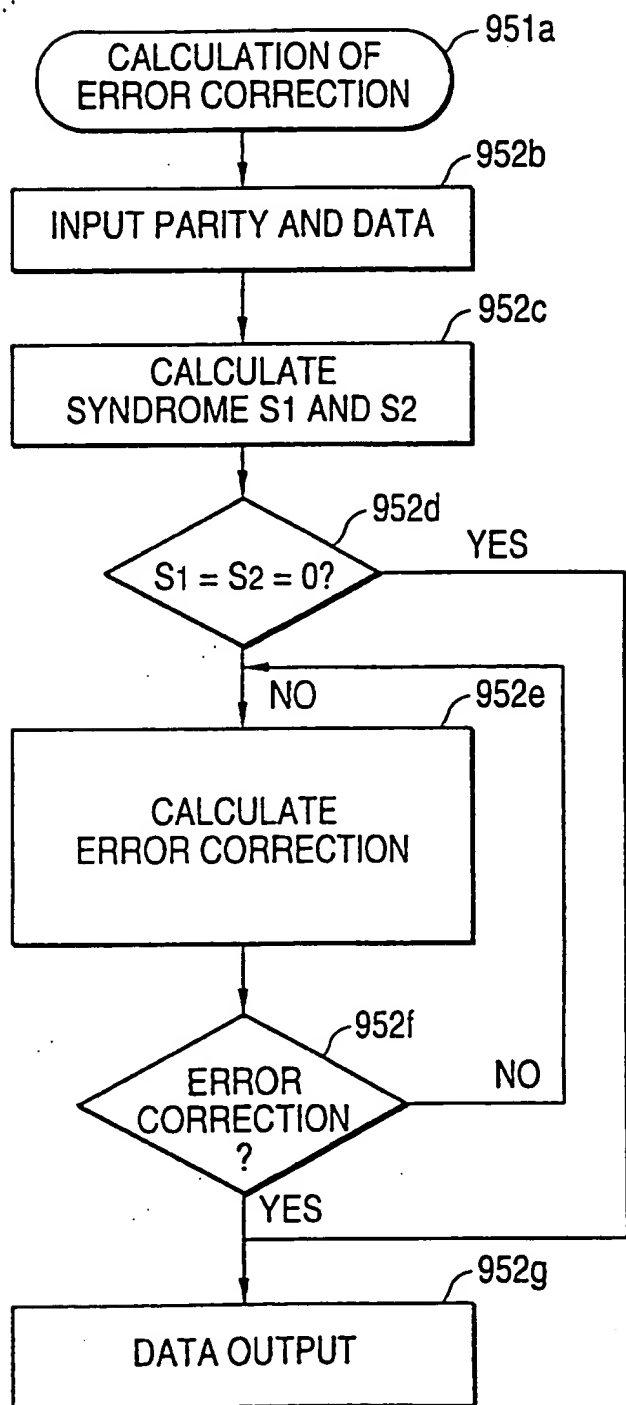
FIG. 166

FIG. 167

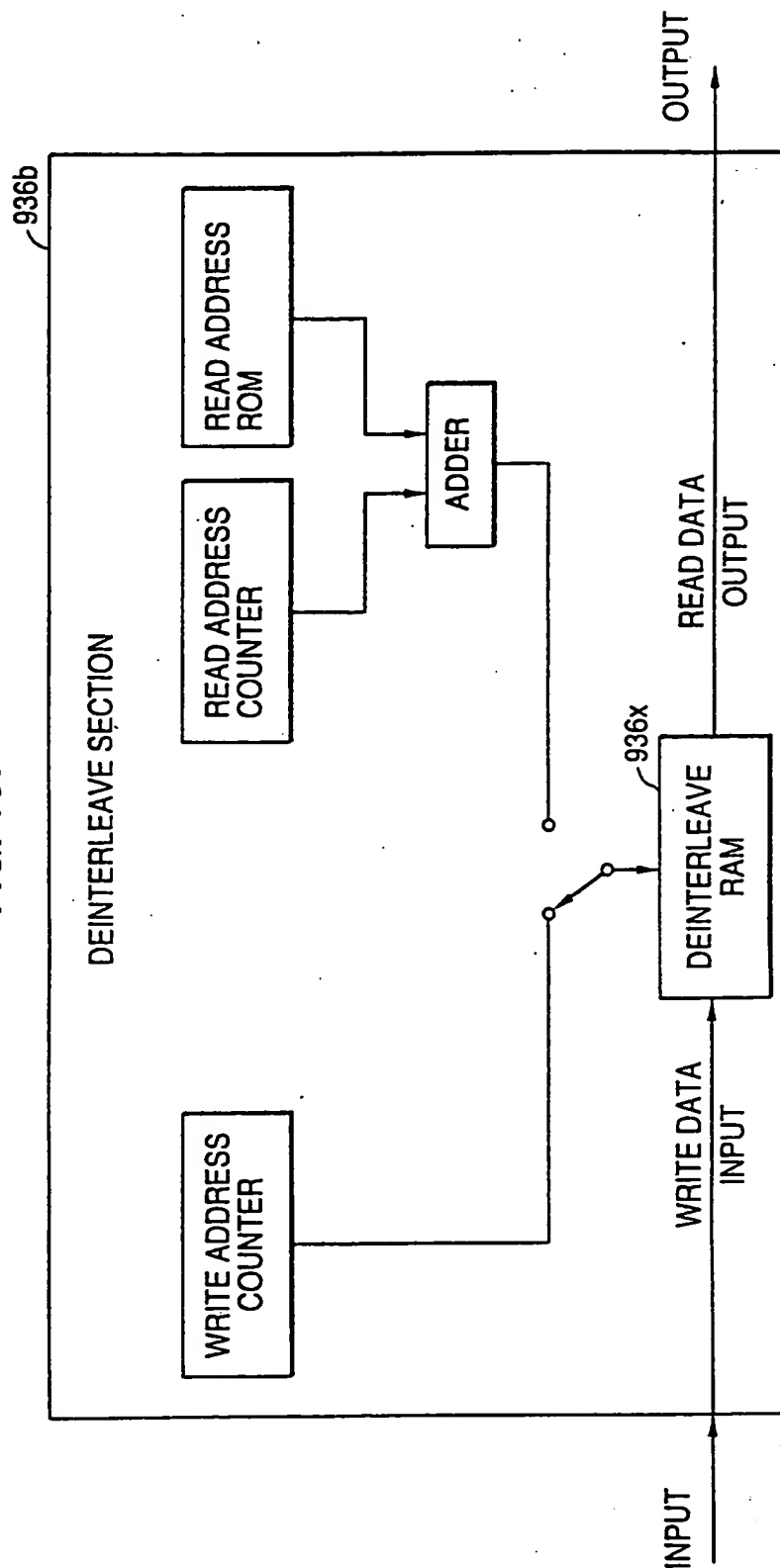


FIG. 168(a)

INTERLEAVE TABLE

1	2	3	4	5	6	7
DATA						C2 PARITY
1	A 1	A 2	A 3	A 4	A 5	A 6
2	B 1	B 2	B 3	B 4		
3	C 1					
4	D 1					
5	E 1					
6	F 1					
C1 PARITY	PARITY	PARITY	PARITY	PARITY	PARITY	PARITY

FIG. 168(b)

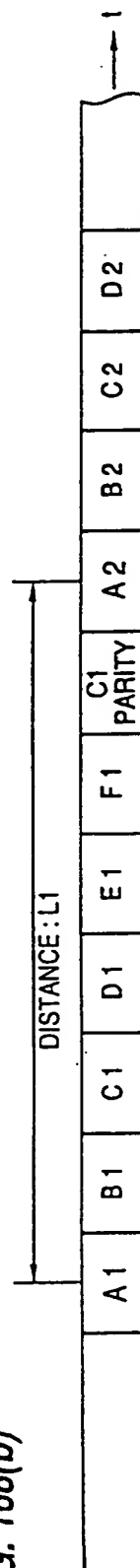


FIG. 169 (Amended)

COMPARISON OF REDUNDANCY

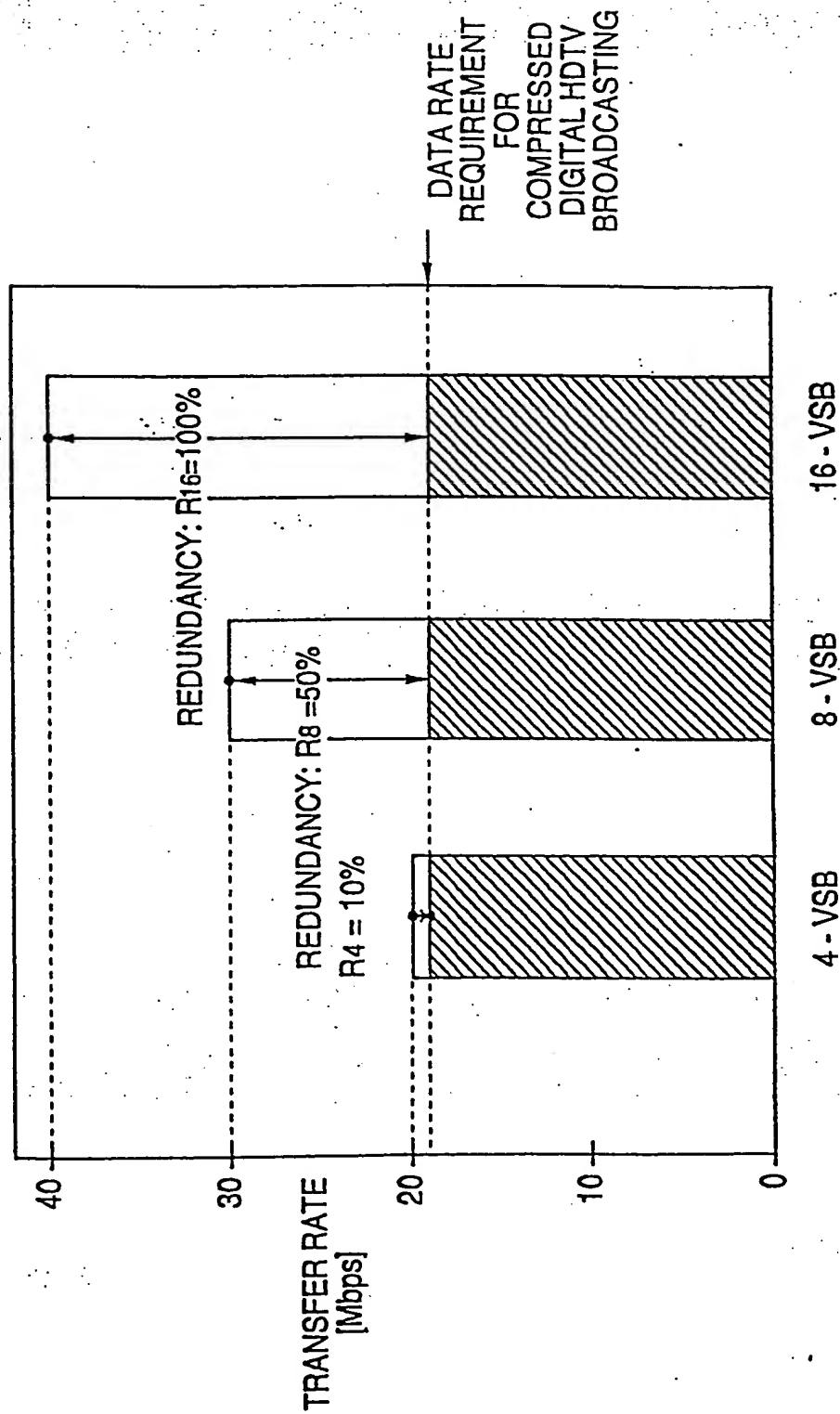


FIG. 170

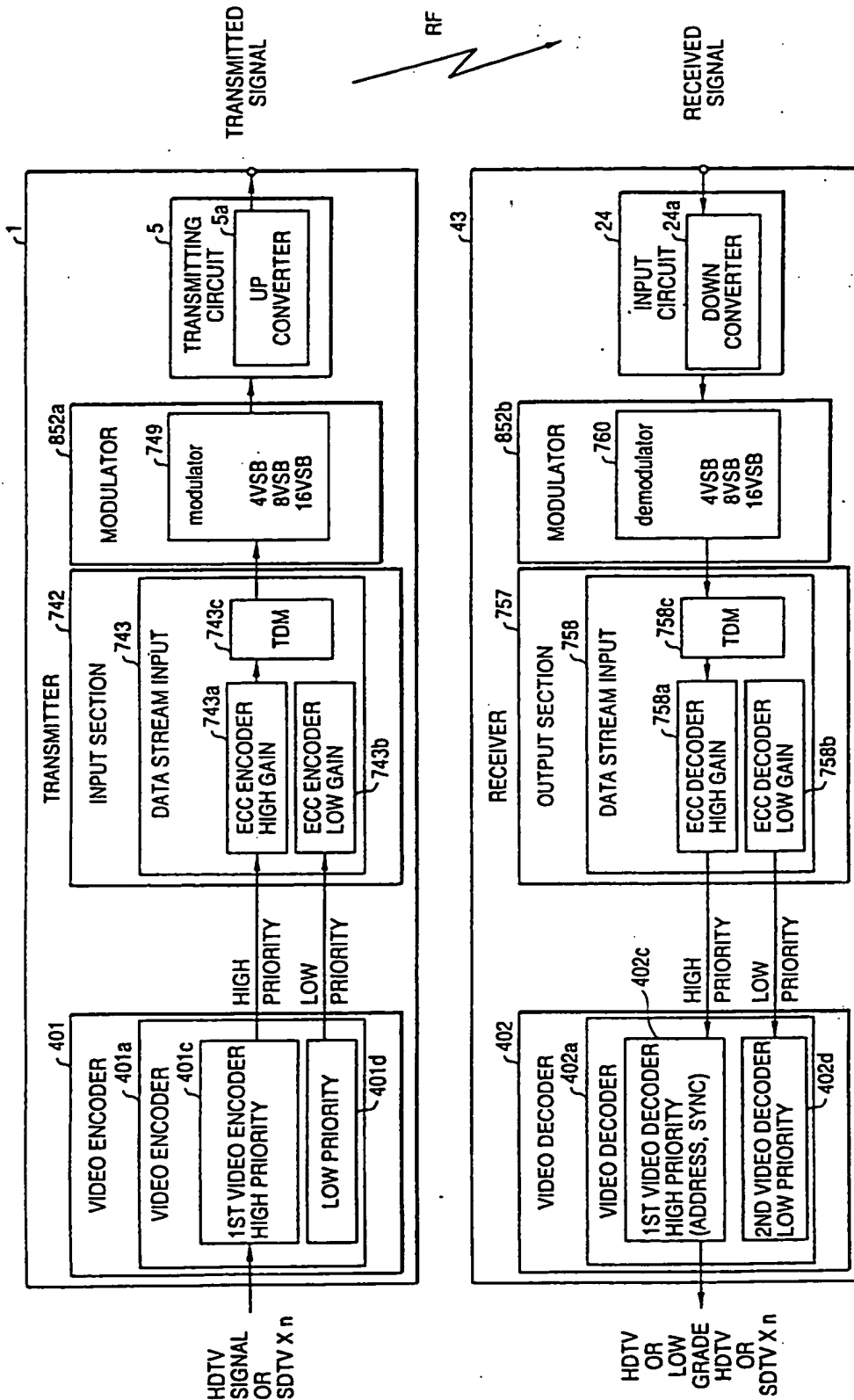


FIG. 171

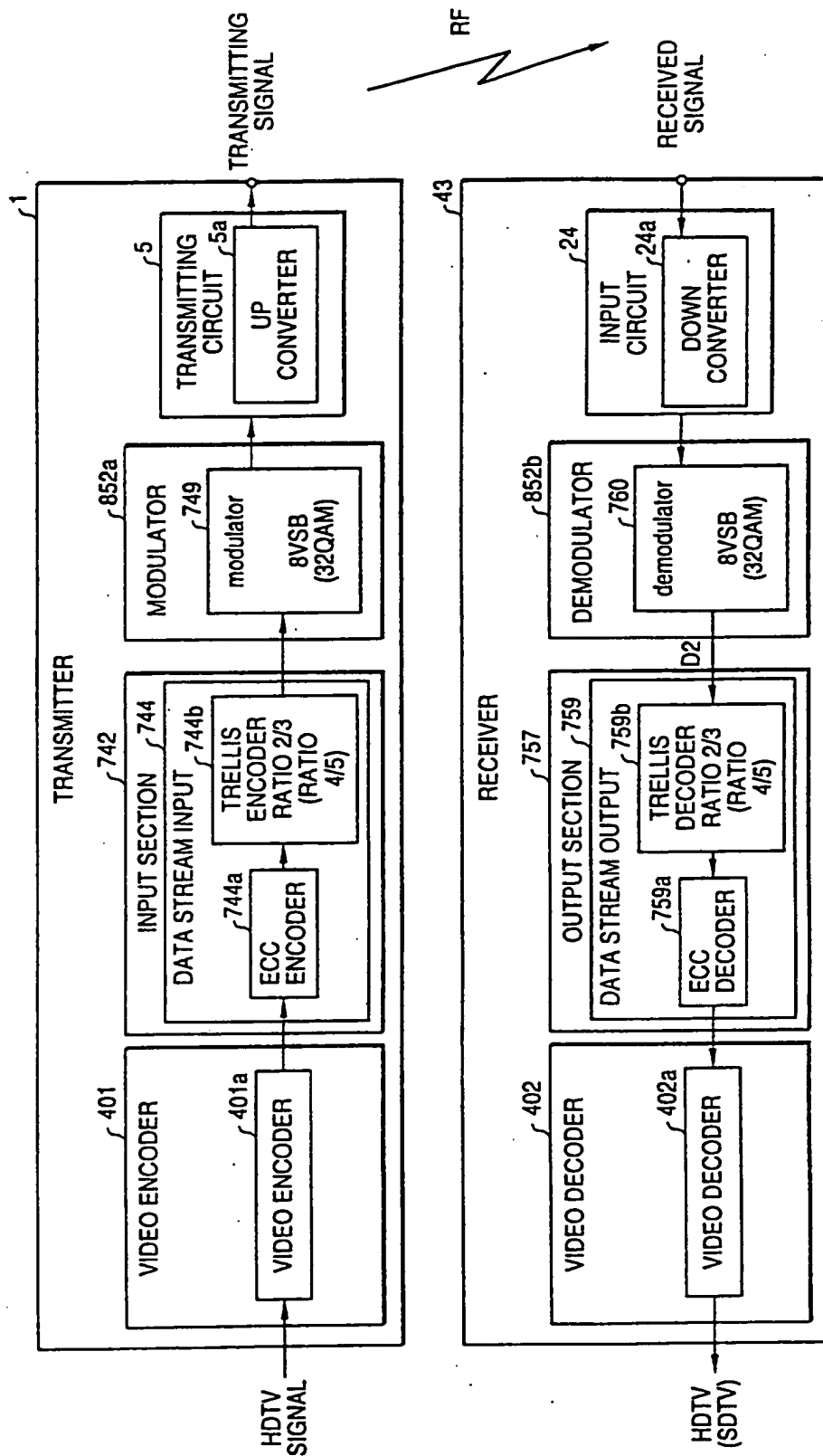


FIG. 172

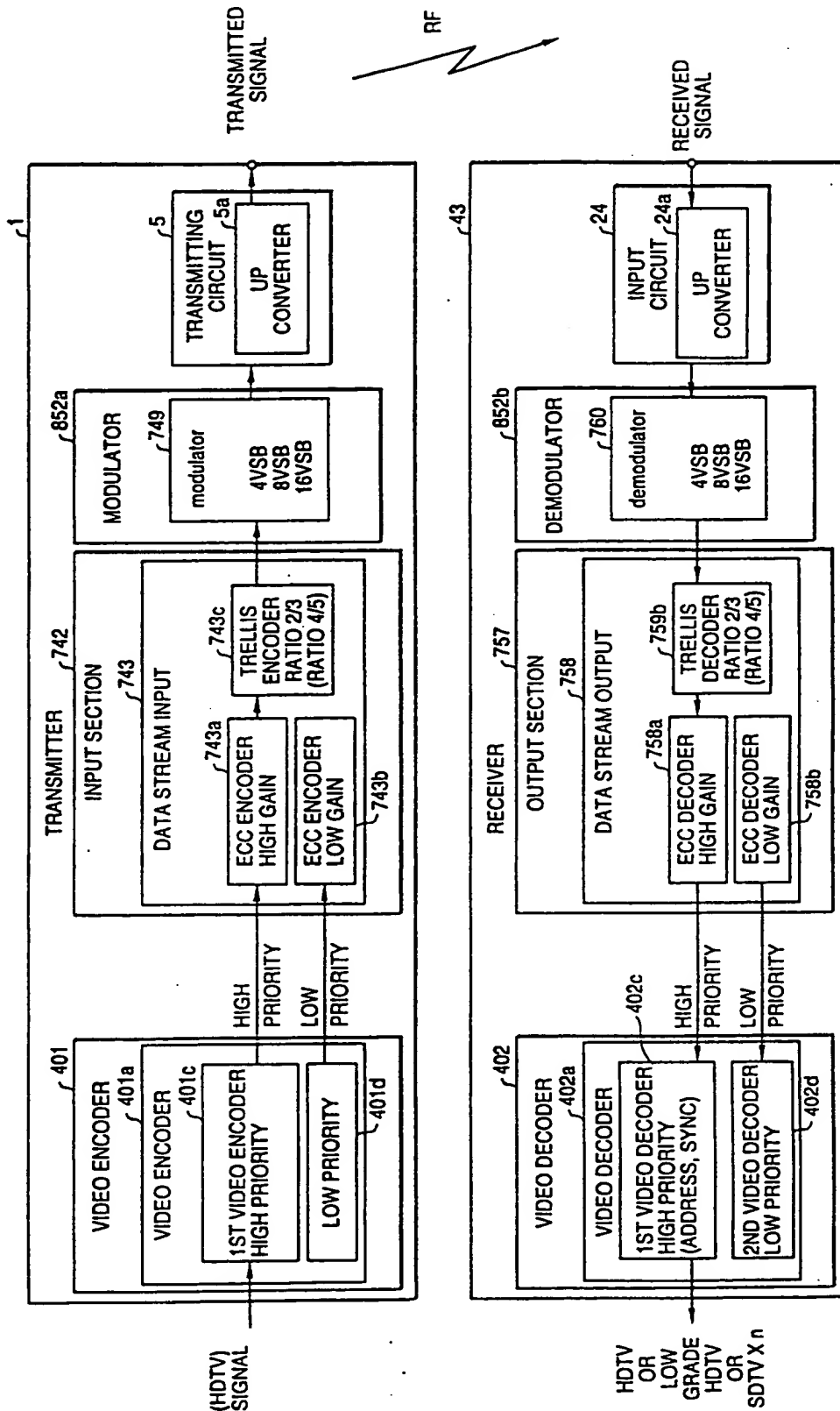


FIG. 173

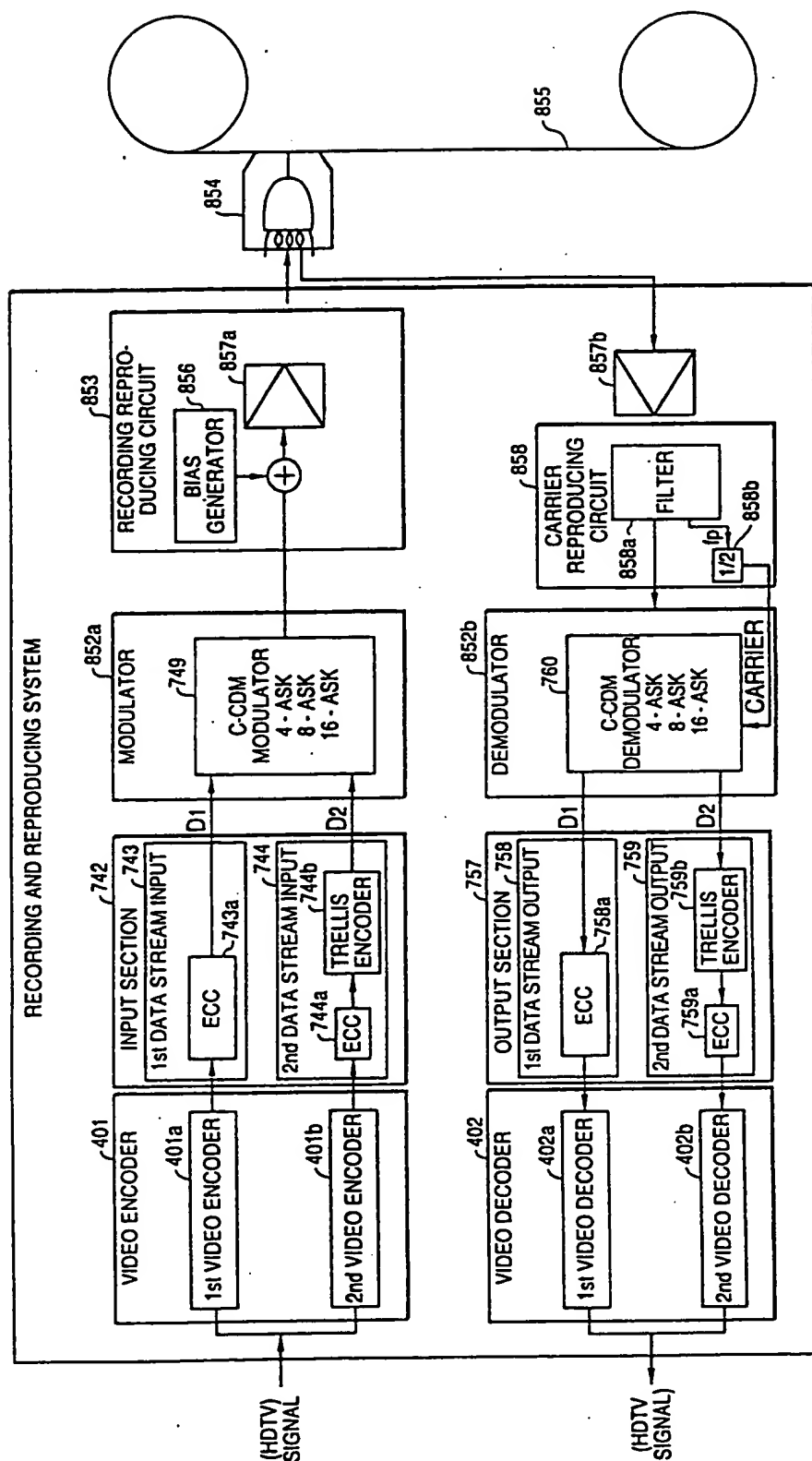


FIG. 174

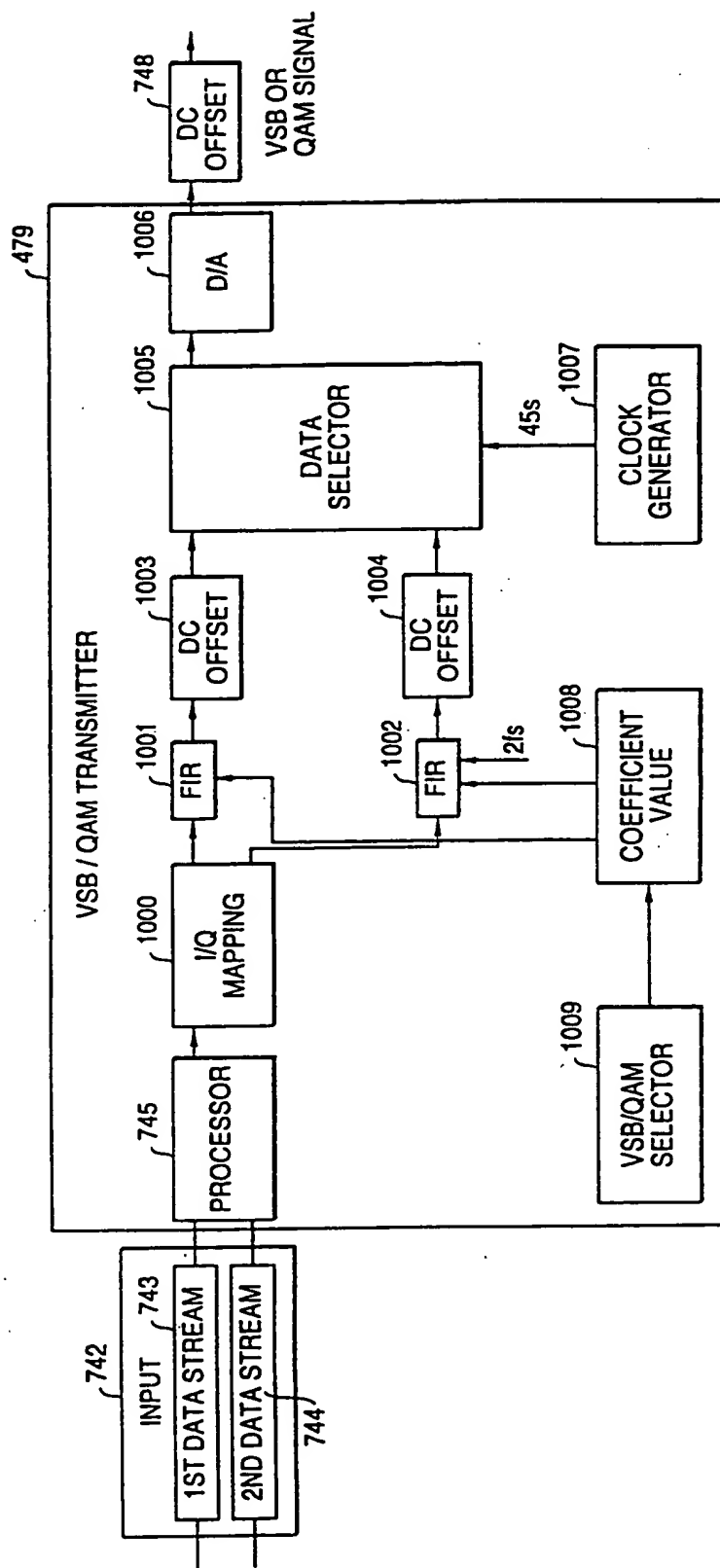


FIG. 175

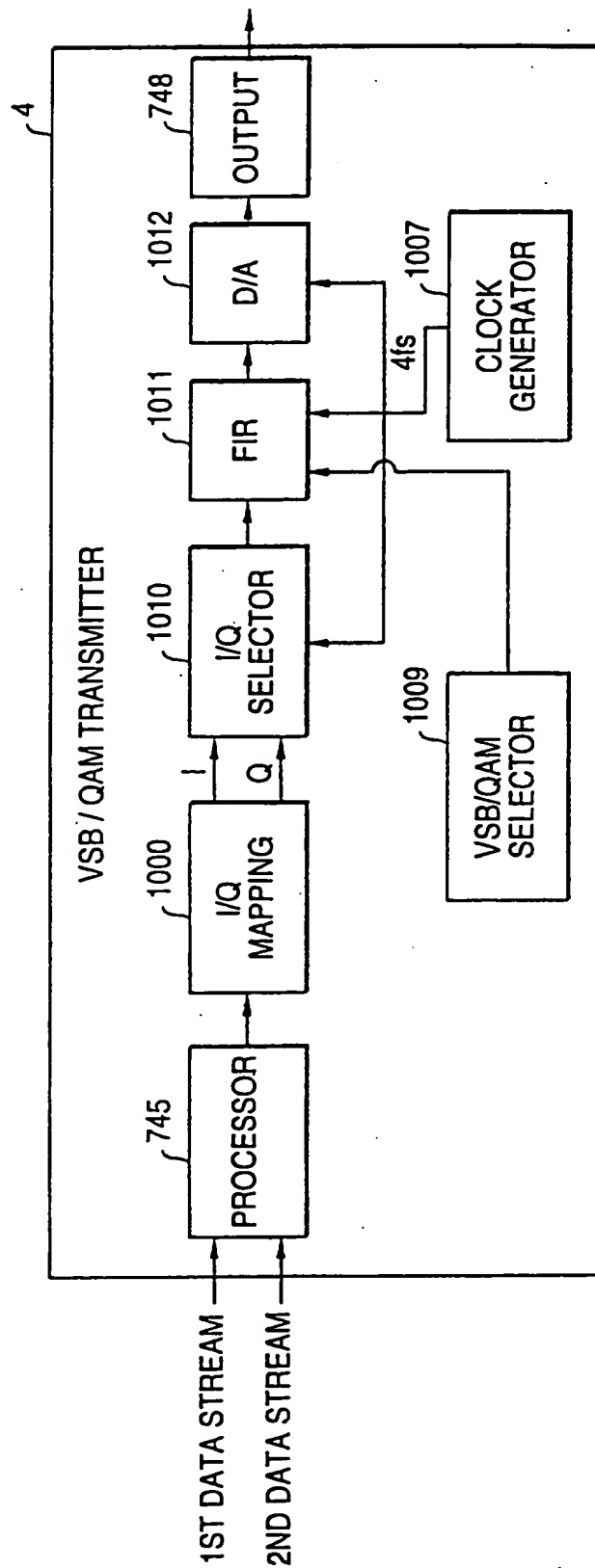


FIG. 176

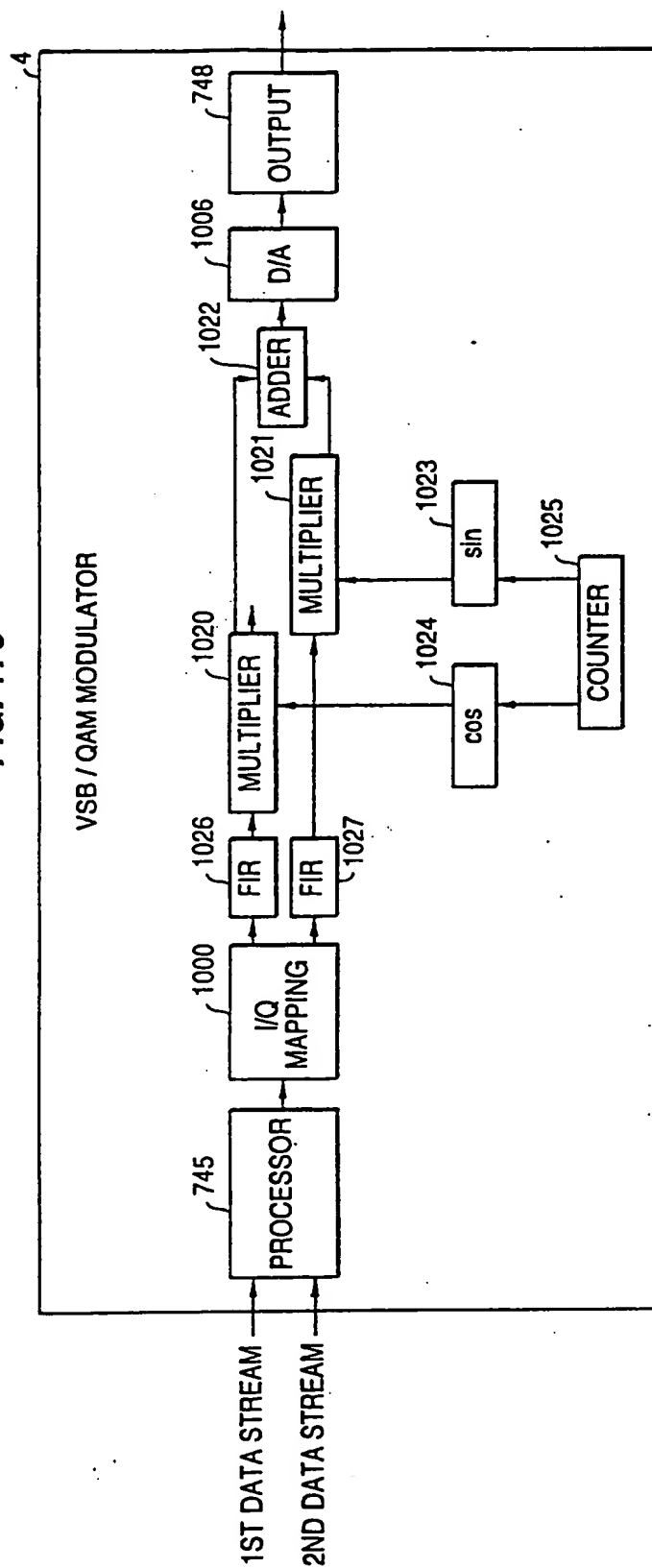


FIG. 177

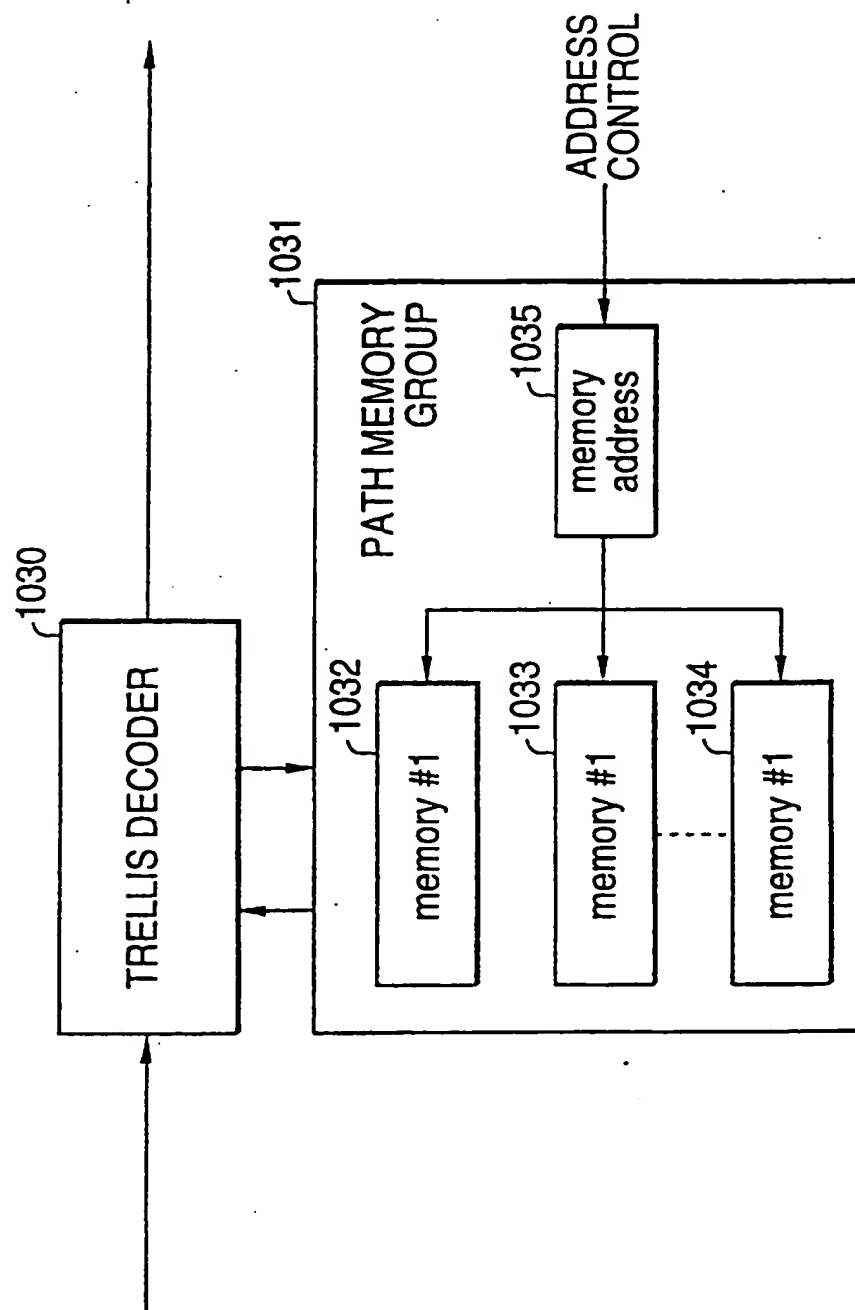


FIG. 178

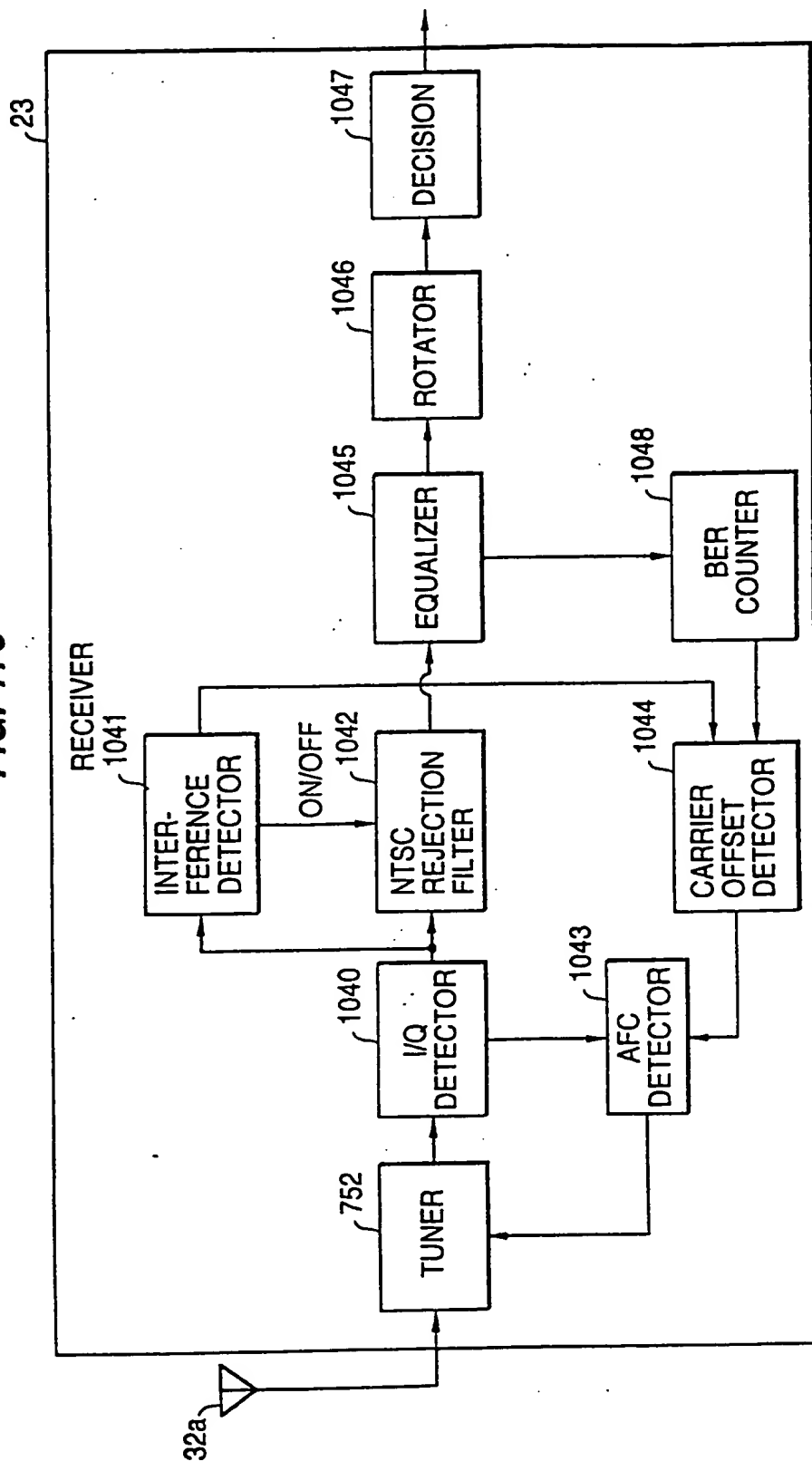


FIG. 179

